

HIGHER EDUCATION: FROM AUTONOMY TO SYSTEMS

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FOREWORD

The center of gravity in higher education is moving upward from the single institution to the coordinating body responsible for a broad range of institutions within a single system. Yet the emergence of these coordinating devices has been largely unexamined, perhaps because the problems of higher education as a system are just now beginning to surface. The need for study of these bodies is clear: they may in the long run have a decisive effect on the shape of the future of higher education.

An opportunity for a first look at systems on an international scale presented itself with an invitation from the Forum Branch of the Voice of America (U.S. Information Agency) to edit a series of talks on this subject. The 27 lectures included in this volume were originally presented as half-hour broadcasts over the Voice of America during 1971-72.

It is hoped that this volume will stimulate the reader to a new interest in educational systems and to a recognition of the worldwide stage on which these systems operate. The lessons of coordination—at state, regional, national, and international levels—are just beginning to be unearthed. This book brings some of them to light.

Very special thanks go to Barbara Baird Israel who is the Associate Editor of this volume. She has had the heaviest burden of finding lost writers and then turning the manuscripts into readable English. Also warm thanks to Mary L. Ryan, Christine K. Smith and Margie R. Sifuentes for their editorial assistance, to Max Grossman and Richard Gordon of the Forum Branch of Voice of America, and to all the writers who have made this project an instructive one for the editors.

James A. Perkins

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INTRODUCTION

THE DRIVE FOR COORDINATION

JAMES A PERKINS

Higher education is in a state of transition. Under the pressures of increased numbers of students and rapidly rising costs, new organizations are being created that are changing the educational landscape. The traditional independence and autonomy of institutions is giving way to state or national coordinating bodies. In many countries this has led to increased governmental participation in the affairs of universities and colleges. These new systems, of which the university is simply a part, form a structure of higher education that has so far been largely unexamined. In this series of lectures we hope to illuminate, for the first time, the ways in which systems are being developed to provide for planning and coordination of higher education. Since many countries are struggling with similar problems in the effort to bring planning to their educational systems, the presentation will be international in scope.

I would like first to review briefly the factors behind the drive for planning and coordination. Most educators are all too familiar with the multiplicity of crises facing their institutions. In the last two decades we have seen growth in higher education that can only be called phenomenal. Enrollment has doubled, tripled, or quadrupled in many countries. Thus the physical expansion of our institutions of higher education became inevitable; schools grew larger and larger, and many new campuses were established.

The so-called knowledge explosion created a different kind of strain on traditional institutions. Where the university had once thought of itself as an institution that could explore the unity of knowledge, it now finds that

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in order to maintain excellence it must concentrate on specialized segments of knowledge. In the past decade or so, new kinds of schools—two-year colleges, teacher training institutes, technical institutes—have emerged in many countries, so also have new uses of technology, such as educational television. The growing and special needs for higher education seemingly can no longer be met in a uniform system.

As colleges and universities have become more specialized, they have also become interdependent. The distinguished scientist Caryl Chessman has provided a useful model for the study of organisms and organizations. I think this model applies particularly to the development of higher education. In his book *Of Societies and Men* he relates how growth leads to complexity, complexity to specialization, and specialization to integration. When we look at higher education, we can see that the need for coordination of our specialized institutions is one of the prime reasons for the development of systems.

The towering costs of our academic enterprises are another element in the drive for coordination. Area studies programs require more and more hard-to-get books, and their personnel, more and more airplane tickets, the physics laboratory requires an incredibly costly electron microscope; the college of agriculture requires an expensive computer to keep track of the health of the cattle in its region. No university could assume the expense of all these facilities itself. Moreover, the high level of expertise needed for all these activities is just not available on any single campus.

Another trend has become unmistakable. Because the costs of higher education are so enormous, there has been growing reliance on public funds for support. Dependence on public funds has led, in turn, to increased demands for accountability to the public or governmental authority. In the past, in countries where higher education was formerly supported largely through private means, there was less public scrutiny of how an institution used its resources. That has all changed. Now we see a critical concern for achieving balance between the needs for funding, planning, and coordination on the one side, and the needs for independence, freedom to innovate, and internal flexibility on the other.

The need for planning has given further impetus to authorities outside the university. With the rising clamor for admission to higher education, attended by an equal clamor for trained manpower, no political body at any level can afford to allow the public's great interest in educational development to be satisfied by mere chance.

Now let us examine for a moment the hierarchy of institutions that are being developed in higher education. This new world is fascinating to behold—it is almost like watching islands rise out of the sea in response to

subterranean upheavals. Some systems have been designed to coordinate the interests of the universities. The University Grants Committee in Great Britain functions in this way, acting as intermediary between universities and the government. Others have been designed to bridge the state-federal relationship, such as the Wissenschaftsrat in West Germany. Still others leave most of their planning and coordination to the central ministry of education, as in Sweden and Japan. All these systems, however, are faced with the same problems of how to harmonize the interests of students, faculties, administrators, governments, and the general public.

Systems in the United States

I would like now to outline the complicated picture of systems in the United States, which will be covered in detail by the next few speakers in this series. Later speakers will be describing systems that have emerged in other countries. In the final lecture of the series I will try to pull together our observations on the future of coordination.

In the United States it was natural that the first efforts at developing higher education would take place at the state level. Public higher education has always been essentially a state responsibility in America. Therefore, it was the governors and state legislators, with their political sensitivities, who first presented demands for state plans and for institutions to carry them out. In the American tradition, the solutions have varied from one state to the next.

But even statewide plans and statewide administrative systems have not met all the needs. For example, the existence of comparable and expensive professional schools in adjacent states was found to be both inefficient and extravagant. In the interest of sharing resources, state governments and universities have banded together to form regional organizations based on interstate compacts. The Southern Regional Education Board, the Western Interstate Compact for Higher Education, and the New England Board of Higher Education, the major regional organizations in the United States, thus emerged.

Not all regional organizations are of the state compact type. Nor do all of them involve the direct participation of public authorities. In the Midwest, for example, the universities themselves have banded together to form the Committee on Institutional Cooperation, consisting of the "Big Ten" and the University of Chicago. In this case, the universities, not the state governments, took the initiative; even more uniquely, this committee involves the equal participation of both public and private institutions.

Useful as organizations at the regional level are in the United States, they frequently suffer from being suspended between the two focal points

of real political power—the state and the federal governments. Although the federal government has traditionally not had a direct responsibility for education, this situation is in the process of dramatic change. Perhaps predictably, this change has followed rather than preceded the development of a national viewpoint on the part of educators. Let us look briefly at some of the present pieces of such a national system.

The first structures were, naturally enough, a series of associations of colleges and universities organized to exchange views about common problems. These associations have prospered and multiplied. Today they cover, on a national basis, every conceivable type and style of college and university. Even within this welter of associations, the instinct for order has asserted itself with the formation of the American Council on Education as the top holding company for all the special groups, ranging from the American Alumni Council to the Association of American Colleges.

Then there are the great foundations with both national and international programs. Committed to spending their incomes wisely for new ventures, they must develop ideas of the national interest in education as guides to giving. And they do. But these ideas of the national interest, even though completely uncoordinated, serve to impress on the national community images of national purpose and national priorities that work their way into the plans and programs of public and private agencies. It is not just through their grants that the foundations exercise their influence, but also through the design and strategies that determine their grants. Foundations serve, therefore, as national planners in the private educational sector, even though the effects of their plans may not always be decisive.

Another segment of our national educational superstructure consists of the agencies that have been created to perform various functions that the universities could not perform individually and never did perform collectively. The need for a broadly based faculty retirement program, for example, which made it possible for a professor to take his pension with him from one institution to the next, led to the creation of the Teachers Insurance and Annuity Association at the end of the First World War. Similarly, the need for a national program of testing for the admission of students to higher education led to the College Entrance Examination Board and the Educational Testing Service. The desire for national scholarship and fellowship programs, which would recognize the national distribution of talent, led to the Woodrow Wilson Fellowship Program and the National Merit Scholarship Corporation. And a mounting concern over the international aspects of higher education, including the development of higher education abroad, led to the formation of the Institute of International

Education, the African-American Institute, and more recently, the International Council for Educational Development.

Each of these organizations has been established to perform special tasks for higher education, but significantly all of them have been organized at the instance of some source outside the university world. It is a somber thought that the universities have not had the imagination or the initiative to establish these agencies themselves. Meanwhile, these agencies are in a rather strange position: they are under the supervision neither of the university nor of any other educational authority, except the ad hoc boards that were created to run them or the foundations that came up with the ideas and provided the original funds.

Activities of great importance to the universities are thus now completely outside their control. But it is well to note that the system as a whole is still in transition. Sooner or later, either new concepts and structures will emerge that will embrace both the universities and these service organizations or else the universities may decide to supervise the job themselves, as perhaps they should have done all along.

Role of Federal Government

Behind all these private organizations, of course, stands the presence of the federal government—increasingly committed to the improvement of educational opportunity, to the strengthening of institutions of secondary and higher education, to the encouragement of higher standards of performance, to the advancement of research required in the national interest, to an expansion of the creative arts, and to a concern for educational development in modernizing countries. An aroused government is thus responding on many fronts to a sharpened conception of the national interest in education.

But the role of the federal government as coordinator and manager has yet to be brought into focus. Since the federal government has not had prime responsibility for education in the United States, the lag is understandable. But assistance is now coming from many federal sources, and other signs of an expanding federal interest are not hard to find. Questions of educational standards have already been raised by the government. And vigorous federal attention is being given to problems ranging from the education of the disadvantaged and the quality of urban schools to medical education and the better distribution of university excellence throughout the country. This expanding federal role puts the most severe pressure on the public and private universities to evolve national organizations and

programs of their own that will act as both counterparts and counterweights to the new federal interest.

International Agencies

Moving with a perspective even broader than that of the federal government meanwhile, are those agencies busy with higher education at the international level. There are International regional bodies, such as the Union of Latin American Universities, the Council of Southeast Asia Universities, the new Association of African Universities, and the Carnegie-sponsored Council on Higher Education in the American Republics. And there are such universal bodies as the public Unesco and the private International Association of Universities.

Although many of these groups are relatively new—and some are still quite fragile—they are beginning to monitor a variety of important studies that may well affect planning at national, regional, state, and even university levels, particularly in the area of assistance to universities in the underdeveloped countries. As a sense of world community evolves, and increasingly it must, these international agencies will be in ever stronger positions to express their interests and to influence educational planning.

That is roughly the picture of the educational pyramid that is now emerging. The university is only one level in the whole vast hierarchy of education that has been built up around it. Below it are the department and the college, and the complex of liberal arts and technical schools. Above it are the state agencies, the regional organizations, the federal structures, and finally the International organizations. Each of these organizations, arranged one on top of the other, represents a new interest at a new and larger geographical level.

In the long run, this structure itself matters very little to society as a whole. What society cares about is not which level of this hierarchy has the right to lead and to make decisions. What matters is that the right decisions are made at the level most competent to make them, and that these decisions are carried out successfully. The approval of society will come, in the end, not by claims of privilege but rather from results observed over time. And the desired results will be in those areas where society asks the most of its educational systems.

Critical Role of University

Let us look at several of the requirements that society imposes on education and examine the capabilities of the various levels to deal with them. For what we find here will give us an important clue to the distribution

of power and, not least, to the crucial role of the university in the entire educational organization.

First, let us look at the protection of academic freedom, for without academic freedom there is no educational system worth discussing. Again, my remarks are directed mainly to the system in the United States, although many of the same considerations apply elsewhere.

The department and the college within the university are important for organizing the defense of freedom, but since they do not have the legal authority to hire and fire, they obviously cannot do the job alone. The university faculty is even more important, first, because it can speak more easily for the university as a whole, and second, because it is the body that participates in setting the rules of tenure.

Important as the faculty is in the protection of academic freedom, however, clearly the real defense within the university comes from the joining of trustees, administration, and faculty. It is a simplistic and outdated notion that working together with trustees and administration results in compromise of academic freedom. As a matter of fact, in the overwhelming majority of cases, faculties, administrations, and trustees have developed a solid consensus on the subject of academic freedom, and scholars are well protected by it.

Beyond the university, concern for academic freedom weakens as we move up the scale. It is not that regional and international bodies aren't interested, it is simply that they know they can't do anything about academic freedom, so they are concentrating on other matters. They assume that the universities are responsible for academic freedom and have the power to defend it. We can conclude, therefore, that the unique combination of forces at the level of the university provides the greatest barrier to the violation of academic freedom.

A second fundamental requirement posed for an educational system is the need for continuous change and innovation. The world is obviously faced with a vast need for new ideas and for manpower trained in new areas of knowledge. Let us see how change is regarded at each level of the hierarchy we have just described.

Again, let us start with the department. A relatively flexible instrument when compared with the great professor in universities abroad who dominates his field, the department is in most cases essentially a conservative unit. Its actions and positions reflect its dominant elements and the forces that have been balanced to produce some kind of departmental consensus. Those who make the consensus are not likely to produce the revolution to upset it. Furthermore, departments are not easily subject to change from the outside. They have become specialized in their fields of knowledge to

the point where faculty from other departments find it very difficult to recommend changes, even when they have a vague feeling that changes are in order. Professional specialization frequently cuts so deep that faculty in one specialty are not in the best position to see into the next academic channel. All of this makes change at the departmental level somewhat hard to come by.

At the level of the collegiate dean, innovation can be accomplished, but it is a delicate art. For the dean who wishes to exercise leadership, the task of innovation will be easier if he has arranged for the rotation of departmental chairmen. He can also wield great influence by concentrating his attention on filling the major vacancies with men of the highest professional quality and by keeping alert to those occasions when the time is ripe for improvement.

The same prescriptions apply to the university president, although, generally speaking, his access to funds gives him an even more powerful lever in effecting change. It is a lever, however, that he must employ with care. He must not allow the availability of funds to become more important than the changes they are to bring about. A president is, or should be, in touch both with new requirements and with new ideas, and if he cannot bring them to the attention of his community, he abdicates his academic leadership.

Outside the university, the various coordinating bodies have great potential as innovating forces. So far, however, the performance of supra-university groups as agents of change has not been impressive. The regional compact organizations have to keep fighting a tendency to the routine. Perhaps they feel too directly the weight of public bureaucracy, or perhaps they are too new to have achieved the necessary acceptance. The voluntary organizations, notably the Committee on Institutional Cooperation, appear to have more zest and imagination.

Foundations

The most vigorous agents for innovation are the great private foundations and federal agencies, such as the National Institutes of Health, the National Science Foundation, and the U.S. Office of Education. These federal agencies have the great advantage of being free from the direct operations that restrict the range and vision of many state educational offices. Further, the new money continually available for new ideas makes federal agencies—for the foreseeable future, at least—extremely powerful forces for change and modernization. We are perhaps too dimly aware of the blessings of a system that leaves the federal government free to press for improvement and change, while the states bear the burden of daily operating supervision and budget-making. This freedom, it seems to me, is the most

persuasive argument for having the federal government stay away from assuming direct responsibility. I hope that federal officials will not overlook this advantage.

The role of the foundations as innovators has been crucial, particularly at the program level. It is unlikely that major new programs in U.S. institutions, such as area studies, the new mathematics, and honors courses, would have gone into such speedy academic orbit if foundation initiative and foundation backing had not been available. But foundation funds, with the exception of those of the Ford Foundation, are becoming a smaller and smaller fraction of the total academic budget. The tendency will be for foundations to move away from institution-wide support and even from programs and projects, and finally to become operating institutions that use their income for their own internal programs. Since the budget for higher education is increasing faster than the income of foundations, foundation support can be expected to play less of a direct part in educational change. The effect of these developments will be to shift the source of the innovative force from foundations to federal agencies on the program and project level.

Planning

A third area of public interest in the university system has to do with planning. The significant point about planning is that, as the cost and importance of educational matters increase, decision-making moves up the hierarchical scale, and away from the educational institutions toward political structures.

It is only half the story to say that management and decision-making go up the scale as costs and importance of a project increase. The other half is that, as costs and importance rise, there is a tendency for decision-making to gravitate closer to the political arena. The decision to locate a 10-billion-electronic-volt machine at Cornell University was a budget decision made at the level of the White House. It very nearly became a deeper political question involving the Senate and other regions of the country. The whole matter was a fascinating case study of the impact of cost and size on the locus of decision-making.

This raises a final point about planning. If planning now requires the participation of larger and more comprehensive organizations, then universities will have to modify their instincts for autonomy and take their places as full partners in these new planning agencies. If they do not, the inevitable consequence will be that planning and coordination will be performed by an exclusively political body.

This is the complicated balance of considerations facing all systems of higher education. The price of too much decentralization is to create an

administrative vacuum within the education hierarchy—a vacuum which will inevitably be filled by political authority. Too little decentralization keeps the central power in academic hands, but the price may be paralysis on individual campuses. It requires considerable statesmanship to understand clearly the dangers of either extreme solution.

Those who want academic direction to remain in academic hands have no choice, it seems to me, but to learn how to balance their desires for independence with the necessities for close collaboration with other universities. The only alternative will be a far more direct intervention in university affairs by government agencies. And none of us looks comfortably on that prospect.

University Retains Decisive Role

Finally, we must mention the responsibility for the integration of teaching, research, and public service—the traditional missions of higher education in the United States. Has any agency above the level of the university established a claim to perform this task better than the university? The answer is clearly no. The specialized agencies have important roles to play in helping the university to find answers to one or another of its activities or requirements. But testing, faculty pensions, student mobility, fellowships and scholarships, coordination, planning, and the stimulation of change—none of these activities is as central to the management of knowledge as is the essential work of the university. The university remains one level in the new educational hierarchy—but it is the decisive level.

The moral of our story is that the university's role demands not isolation but leadership, not autonomy but rather participation in all levels of academic organization. As the one institution in the hierarchy of education where the main business of education is centered, the university must be the chief participant, the quarterback, the leader in the whole system of higher education. For the health of the system turns largely on the vitality and health of the university, located in the middle of the entire scheme. And in order to maintain the university's vitality, those who work in the university must increasingly conduct themselves as members of a much larger community and as participants in activities at all levels of the system.

STATE SYSTEMS IN THE UNITED STATES



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NEW YORK — THE STATE UNIVERSITY

SAMUEL B. GOULD

The hunger of the American people for more and more education has become a dramatic phenomenon of our national life. Census figures compiled in 1970 reveal that the percentage of students graduating from secondary schools is now *double* the 1960 figure. During this same time period the percentage graduating from colleges and universities has *tripled*. And there is very little likelihood that this trend will level off before the 1980s.

What part has the State of New York played in satisfying the hunger of its citizens? In population it is the second largest of all the states, and it is the most affluent. For more than two centuries it was blessed with a steadily increasing number of excellent private colleges and universities, large and small, which met the major undergraduate and graduate educational needs. It also had a group of publicly supported undergraduate colleges in New York City that achieved considerable academic eminence. After World War II, however, it became clear that the total need was not going to be met without the development of a state university together with a large number of two-year community colleges. So rapidly has this development taken place that today, only a quarter of a century later, more than one-half of college and university students in the state are attending *public* institutions. By the end of this decade it is expected that the publicly supported colleges and universities will take care of *three-fourths* of the students.

The 1970 census figures help to explain why *public* higher education, which ordinarily makes provision for greater numbers of students than does private education, has become such a dominant force today. They also explain in part the extraordinarily rapid growth of the State University of

New York. Even though this is the youngest state university in the nation—having been established in 1948—it is already listed as the largest. In 1970 it enrolled more than 200,000 full-time students. More important than size, however, is the recognition that the university has become steadily more prominent for its developing academic quality and its unique form of organization.

The motto of the State University of New York is a clear statement of its philosophy: "Let Each Become All He Is Capable of Being." Such a commitment has had profound influence upon the organizational structure and the academic programs of the institution. What kind of university has emerged from such a motto?

Characteristics of the State University

There are three fundamental characteristics of the State University of New York. One of these is unique, the second is unusual, and the third you would expect to find in any first-rate academic institution.

The unique characteristic is that of a university embracing *all* the aspects and levels of higher education and thus being a system as much as a single institution. It comprises 69 separate campuses at the present time, with more in the planning stages. These run the gamut from university centers (where most of the graduate and professional work is concentrated), all the way to the two-year community or junior colleges in which it is possible for a student to start his post-secondary education close to his home. In between are arts and sciences colleges that offer the baccalaureate degree, specialized colleges such as forestry or ceramics or even preparation for careers in the maritime service, and agricultural and technical colleges.

The unusual characteristic is that of a decentralized method of operation linked to centralized guidance in philosophy and policy so that a feeling of university unity prevails. This means that each campus, although guided and governed by general policies of the university, has considerable independence in handling its own affairs. It has its own president and administration, its own board of trustees with designated responsibilities, its own budget, and its own identity as a separate institution within the university. At the same time, as part of the total university, each campus draws upon the central administration for assistance and guidance and upon the university Board of Trustees for broad policy decisions. Each campus also draws upon the special strengths of other campuses and often develops with them cultural or educational events or programs that it could not support by itself.

The third characteristic, which you would expect to find in any good university, is that of an institution with high aspirations and huge

responsibilities moving steadily toward the finest quality in all that it attempts. Because it is located in a state famous for its excellent colleges and universities, the State University has had to strive with unusual intensity and speed to achieve an academic standard equal to the best. This has meant recruiting new faculty—including some of the finest scholars of the world—at the rate of more than a thousand annually. It has meant new buildings and equipment of all kinds, including the most sophisticated laboratories, computers, art galleries, theaters, and even completely new campuses. The current building program of the State University, involving a total outlay of more than three billion dollars, is the largest program of its kind in the world. Most of all, this effort toward high quality has meant the introduction of a whole host of new academic programs and a massive development of research activity.

Philosophy of the State University

I think I should say a further word about the educational philosophy on which all of this rests. When the State University asserts that each person should become "all he is capable of being," it is making a mighty assertion, one not to be taken lightly. It is saying that it plans its future in accordance with the philosophy of *full opportunity* for every individual, regardless of age, current occupation, previous educational accomplishments or status in life. To each person who can benefit from more education, the university aims to provide what he requires. This is a commitment in the true tradition of *democracy*, not an easy one to fulfill completely, but certainly one worth striving for. It means new and increased attention to individual guidance, new kinds of courses and programs to meet all sorts of needs, new kinds of testing procedures to determine what capabilities each person has. It means the acceptance of the relatively new concept that every student should proceed at his own speed of progress. It truly makes education a lifetime process with many of the traditionally formal barriers removed.

The State University of New York has always expressed its belief in this philosophy but only in the past few years has it taken bold steps to make certain that full opportunity would become a practical reality as well as a democratic dream. Last year, through the use of a variety of academic and administrative devices, it was able to open 14,000 additional places for students on its various campuses. This was over and above the normal student complement of the entering class. Just recently the university announced the establishment of its seventieth institution, to be devoted entirely to providing programs and examinations for students who cannot be in residence but who may now find it possible to earn one of a number of external degrees. These are dramatic illustrations of the unremitting

efforts the university is making to assure the citizens of New York State of how seriously it takes its responsibility to provide a full educational opportunity for them.

Earlier, in mentioning the State University's motto, I asked what kind of institution has emerged. In answering this question, I have already identified three major characteristics that form the basic foundation on which the university is building: the unity of an institution that has within it all the diverse elements of higher education, the decentralized pattern of administration that protects local campus autonomy; the steadfast, unrelenting drive toward high academic quality. These I should like to clarify even more by adding examples of each that may in their combined effect give you something of the flavor or the atmosphere of this university.

As a multicampus institution, the State University is more than the sum of its parts. Each campus has its own destiny to fulfill, but in doing so, contributes not only to its sister campuses but to the single entity which is called the university. There is thus an interplay or interchange of strength constantly taking place between campuses and a process of unification that enriches the mother institution together with the offspring. The elements of this process become evident in many ways as we examine how the university operates.

Single Budget

For example, the total annual operating budget of the university (which is approximately one-half billion dollars) naturally must be presented for approval to the State Legislature, which has final approval and appropriates the money. You can well imagine what a complicated exercise this is. Think of how infinitely more complicated it would be if each of the 69 campuses were to present its own budget separately, without any regard for other campuses. Not only would an unproductive sort of competition be created, together with endless bickering among legislators who were eager to encourage the progress of only those campuses where their constituents lived, but no general educational pattern for the public sector could be developed over the years. In addition, it would be virtually impossible to avoid a large amount of unnecessary program duplication. For these reasons the State University presents a single budget for all its necessities and defends or explains any one of its items with as much detail as the legislature requests. Once the money has been appropriated, each campus thereafter has its own portion which it administers with a very high degree of independence.

Campus Interchange

Interchange and unification take place in many other ways, some more dramatic than others, but all of them important in the creation of a first class university.

Increasingly the library acquisitions of each campus are being made available to students on other campuses. This is now done mainly by the physical transfer of books and periodicals, but eventually will be done electronically and thus much more speedily. With total holdings of over 7,500,000 items already, the university is able to provide a wealth of library resources. Slowly but steadily the university is creating ways for its campuses to share such wealth for the benefit of every student and faculty member. The important point I am making is that the unified university structure makes this kind of sharing much easier.

In addition to library resources there are many other types of resources shared within the university by its many campuses.

Regional computer centers—far beyond the financial capability of any single campus—are available to campuses as a group. These centers are used not only for academic work but for many administrative data processing functions that bring efficiency and economy to highly complicated and expensive operations.

A very different kind of educational and cultural activity that is strengthened by the presence of a multicampus university is that of the fine and performing arts. Like so many other academic institutions, the individual campuses of the State University offer much to the students in theater, dance, film, music, or the fine and plastic arts, including instruction and studio work. But an important or even indispensable component of this kind of learning is that of seeing and hearing the finest of artists and their work. This component is not easy for each campus to make available, mainly because of cost. The State University provides such a component by having major orchestras, dance and theater groups, exhibits, lectures, and artists-in-residence visit many of its campuses. Because of the number of such events it schedules in touring arrangements, it can make the whole venture far more economical to each campus. Still another component is the opportunity for students to view or hear the work of their peers. This they do through arts festivals and workshops where campuses merge their talents, sharpen their critical qualities, and acquire new perspectives by taking note of what others are doing.

In still another area, that of developing new educational resources for instruction, the university has taken advantage of its unified structure while at the same time encouraging the independent action of the campuses. Many of the campuses have what are called "Communications-Lecture"

buildings with several sizes of classrooms, television studios, audio-visual materials laboratories, and film libraries. All the communication media are used in a variety of combinations. For example, complete courses of instruction by television are created. These are often used on more than one campus according to the needs and desires of individual departments. In addition, the *University of the Air*, a television network, offers courses for credit or noncredit throughout the State of New York, where each year from three to five thousand people avail themselves of this kind of external opportunity.

Support of research within the State University is administered through a special agency known as the Research Foundation, which handles more than \$50 million of expenditures annually, most of which is derived from external grants. Through the resources of the Foundation the research activities of faculty members on all campuses are encouraged by individual grants to finance their projects. Almost a thousand such grants were made last year, with the selection of the recipients carried out by a faculty committee. Here is another illustration of the additional strength brought about by university unity in establishing and supporting a general policy while the practical effects reach out to the campuses and are controlled by them.

I could add much more documentation to the way campus independence and university unity are used to mutual advantage. I have said nothing, for example, about inter-campus faculty relations or student relations, nor have I mentioned community relations. The combination of unity and local autonomy is a difficult one to operate under successfully all the time, but it is the key to the growing ability of the State University to fulfill its enormous responsibilities.

University Planning

There is one other aspect of the university's development that cannot be omitted if you are to have a more complete understanding of what prompts and stimulates whatever happens within the institution. I am referring to the all-important process of planning.

Two kinds of planning are taking place at the State University, one required by legislative statute and the other a series of voluntary actions by the institution itself.

By law the university is obligated to submit a ten-year master plan every four years which then becomes part of the total Master Plan for higher education for the state. In addition, it is expected to make an annual report on progress in carrying out the master plan. The plan covers every aspect of academic and physical growth, together with estimates of enrollment and costs. It is therefore worked out in the greatest detail and is put

together only after systematic consultation with each campus, each of which is asked to formulate its own plan. The plan thus serves as the basis for the future development of the university.

I cannot emphasize too strongly the importance of this regularized planning process, since it makes necessary not only a careful examination of present programs but places priorities on improvements and on the introduction of new programs, the establishment of additional colleges, and the introduction of innovative elements of education.

In an even broader way, the university is undertaking a reexamination of its own role and its aims. To do this it has created a Chancellor's Panel on University Purposes. The panel consists of representatives of trustees, administration, faculty, students, governmental officials, and distinguished citizens from all over the state. It strives to search deeply into the relevance of the university to the society it serves and to issue a series of statements that make clear the directions the university expects to take during the next two decades. Position papers are written and debated, discussions on campuses are organized to reflect internal attitudes and reactions, and outside experts are called in to react and advise. All this is being done not merely to create a statement that seems valid today but to maintain a continuing concern for changing needs and requirements.

What such an exercise will mean ultimately is hard to predict. It may lead to a completely new structure, a whole new set of academic directions, an entirely different sort of relationship between the university and the community. I need not dwell upon the amount of work that goes into this kind of planning process; it is obviously difficult, time-consuming, and intellectually demanding. I can say only that in my view it is probably the single most worthwhile effort on which the university is embarked.

The surprising and exciting fact to be noted, in what I have described to you, is that all that has happened represents only the threshold for the development of the State University. In spite of the size, the growing prestige, and the many complicated arrangements by which it functions, it is truly only beginning to realize its potential. The university's comparative youth is a great asset when we consider such a potential. As an institution it is not so encrusted with tradition that change is extraordinarily difficult. It has a freshness about it, a sense of developing mission, an intellectual vitality that give it courage and lift not only its sights but its spirit as well. If it can continue to nurture such attitudes and turn them into intelligent, fearless actions, this university may well stand as one of the academic models that make the future of higher education more promising and more attractive.



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CALIFORNIA —

THREE LAYERS AND COORDINATION

NEIL J. SMELSER

Public higher education in California is barely more than one century old. It began officially in 1868 when the State Legislature passed a law creating the University of California. From that time the public system has grown from a single, tiny campus in Berkeley to a massive and diversified complex. The handful of students in the pioneer freshman class of the university in 1869 has increased to an enrollment of more than a million students in public institutions of higher education. The number of separate campuses has grown from one in the beginning to more than 120. Its annual budget of a few thousand dollars a year in 1868 grew to a total of one and one-half billion dollars in 1968. In terms of sheer magnitude of growth it would be difficult to find a comparable century in the entire history of education.

As the system has grown, moreover, three distinct tiers, or segments, have emerged. The university was guaranteed constitutional status with a Board of Regents as its governing body from its beginning. For the first half-century Berkeley dominated the system as the only general campus, though special professional schools were established in San Francisco. Political pressure from southern California led to the opening of a southern branch with university status, which officially became the University of California at Los Angeles (UCLA) in 1927. Subsequently a number of specialized research stations—for example, at Davis and Riverside—were converted into general campuses, and in the 1960s several new campuses were opened. At present the University of California is truly a "multi-versity," with nine campuses, and a total enrollment in excess of 100,000 students.

University

Though its functions have changed from time to time, the university has always maintained its place at the apex of the system of higher education from the standpoint of research, professional training, and granting of degrees. The education code of the state declares that the university is "the primary state-supported academic agency for research," that it has "exclusive jurisdiction in public higher education, in the professions of law and over graduate instruction in the professions of medicine, dentistry, veterinary medicine and architecture," and that it "has the sole authority in public higher education to award the doctoral degree in all fields of learning."

State Colleges

The California State Colleges, the second segment, had their unofficial beginnings even earlier than the university, with the establishment of the San Jose State Normal School as a teacher training institution in 1862. Seven more normal schools were established by 1919, the legislature authorized the normal schools to become teachers' colleges in 1921, and to confer the bachelor's degree in 1923. By 1935 the word "teachers" was dropped, and these institutions became general state colleges. Legislation in 1949 permitted them to grant the master's degree in education, and in the middle 1950s they began offering masters' degrees in selected nonteaching fields. The legislation establishing the Master Plan for Higher Education, in 1960, permitted state colleges to grant doctoral degrees jointly with the university. Finally, the education code authorizes faculty research in the state colleges "to the extent that it is consistent with the primary function of the state colleges and the facilities provided for that function."

The history of the state colleges, then, has been one of the continuous expansion and upgrading of functions. As we shall see, this process has been accompanied by intense competition between the state colleges and the university—competition which is far from resolved at the present time. Quantitatively, the colleges grew at a very modest rate in the early decades, reaching a total of only 13,000 students by 1940. Growth in the postwar years was phenomenal, however, with the system moving from an enrollment of 33,500 in 1950 to almost 225,000 in 1969.

Junior Colleges

The third public sector, the California Junior Colleges—or community colleges, as they are now often called—had its official beginning in 1907, when the Legislature authorized legislation enabling high school

and other districts to offer instruction beyond the high school level. In 1910 the first public junior college was established in Fresno. While not the first state to introduce public junior colleges, California was the most prolific in developing them. By 1950 total enrollment in junior colleges was 134,585, and, like the state colleges, they attained an extraordinary rate of growth in the 1950s and 1960s, reaching an enrollment of more than 700,000 by 1969. The state supports more than 90 public junior college campuses in all.

Though some two-year junior colleges have been converted into four-year institutions, the norm has been that junior colleges offer course work for only two years after graduation from high school. In 1960, when the junior colleges were incorporated into the system of higher education by the Master Plan legislation, they were expressly limited to two-year status and to awarding the associate in arts and associate in science degrees. The legislation further specified that instruction should be primarily in three areas: "(1) standard collegiate courses for transfer to higher institutions, (2) vocational and technical fields leading to employment, and (3) general or liberal arts courses."

The general picture of public higher education in California, then, is one of extremely rapid growth within a three-tiered system that has managed, despite some overlapping, to maintain a fairly strict differentiation of function. Each segment offers instruction in the arts and sciences. The university is the exclusive guardian of research and of training associated with high-prestige occupations (medical, legal, academic, etc.); the state colleges prepare students for more advanced academic work and train students for a supplementary range of occupations, especially teaching; the junior colleges prepare students for more advanced academic work and train them for more vocational types of occupations. The differentiation of functions among the segments, therefore, roughly parallels the stratification of the system of occupational roles in the larger society, for which the students of each segment are destined.

Each of the segments, in its own functional sphere, has developed into a kind of national model. The University of California is regarded in many quarters as the greatest public university system in the country; two of its campuses, Berkeley and UCLA, rank among the highest in the nation in graduate training and research. Among state college systems the California State Colleges are perhaps the most highly developed, and the junior colleges have always been at the forefront of the junior college movement in the United States. This obvious point must be made, because the system has also been beset by many troubles, and to focus on these troubles—as I shall do later—might obscure the substantial accomplishments of the system. It is my belief, moreover—and I shall amplify this later as well—

that the same social forces that have contributed to its growth and eminence have simultaneously been responsible for some of its troubles.

What are the general factors that have led to such a rapid and continuous growth of the California system of public higher education? Any enumeration of these factors must be approximate and oversimplified, but the following seem to have been the most important

(1) California, as one of the newer, but larger and more prosperous states in the United States, has always had a fiercely competitive outlook, especially in regard to the older and more "established" states in the East. With respect to higher education, this outlook has manifested itself in the impulse to build a bigger and better system. This competitive outlook, in my opinion, has contributed more than any other single factor to the elitist impulse in California's higher education. This elitism, bred by attitudes of regional competitiveness rather than aristocratic values, has contributed to the continued generosity of California's public to a university of exceptionally high quality

(2) At the same time, values of populism and equality of opportunity are also deeply rooted in California's culture. Among the most democratic of states in social outlook, California could be expected to give mass support to higher education as it came to be regarded as one of the principal avenues of social mobility. In particular, this outlook contributed to the spread of the junior colleges, which were ultimately to guarantee an opportunity in some kind of institution of higher education for every high school graduate in California. This populist tradition has also fostered an attitude of ambivalence toward the university, which has been regarded simultaneously as a source of state pride and as a focus for the expression of sentiments of anti-intellectualism and political suspicion.

(3) As California developed from one of the most backward regions of the country in the mid-nineteenth century into the most urbanized—and one of the most industrialized—states in the country, its demands for urban and industrial occupations (such as engineering, medicine, nursing, law, social work, city planning, criminology), to say nothing of highly skilled labor, have multiplied correspondingly. It fell mainly to the system of higher education to train people for these new and more demanding occupational roles. To do so, their facilities had to be expanded accordingly

(4) California moved from a thinly populated region in the mid-nineteenth century to the most populous state in the nation in the late 1960s. While population growth has been impressive throughout California's history, it has been especially pronounced in the period following World War II. Also, the proportion of persons of student age (18-24) was higher

in California in that period than in the rest of the country, and the expectation that a person in that age-range would be enrolled in an institution of higher education was higher in California than in the nation as a whole. The demographic pressure on California's system of higher education has therefore been very strong, especially in the past two decades.

(5) California has always been a prosperous state, its opportunities to devote substantial resources to education have been correspondingly greater than those of its less opulent sister states. When the federal government and the private foundations opened their coffers to support higher education in the 1950s and 1960s, California received its share of these funds, and its opportunities for educational expansion were further enlarged.

(6) Besides being competitive with other states and other regions, California is also characterized by a brisk internal competition—between northern and southern California, between valley and coast, between rural and urban, between one community and another. As educational institutions came to be regarded as a source of local wealth and prestige, communities and regions came to vie for campuses of their own. This political situation in California augmented the impulse for growth of the system, it also fostered fierce competition for resources within each segment of the higher education and among the various segments.

This blending of social and cultural forces—a commitment to the values of excellence and egalitarianism, a pervasive competitive spirit, the pressure of numbers, and the opportunities of affluence—have propelled California's system of higher education in its remarkable century of growth. Let us now turn to some of the problems that have accompanied that process of growth.

The Pains of Growth

One of the general characteristics of rapidly growing social systems is that they are forever threatening to outgrow those very structures that have been designed to regulate their functioning. This has been true to some extent for each segment of California's system of higher education, and certainly true for the system as a whole.

To illustrate. In the early years of the university, the Board of Regents was able to consider each faculty appointment individually, and to attend to very minor financial details. The university was small and uncomplicated. As Berkeley grew and as new campuses began to develop, however, such detailed regulation of day-by-day administration by the Regents and the central administration became progressively more difficult. In a 1955 report, a team designated to restudy the needs of California higher education complained that the Regents' docket was burdened with unneces-

nary details, and recommended that the business of the Board should be decentralized so that it could give more attention to general matters of educational policy. Some steps were taken in this direction in subsequent years, and in 1965-66, when it was believed by many that too centralized control had contributed in part to the crises of academic authority during the Free Speech Movement. In 1964-65, the Board of Regents undertook to accelerate the process of delegating Regental and statewide administrative authority to the several campuses. As a result of this decentralization, "the Board of Regents has become less an administrative board and more a policy board, and the University has become less a monolithic structure and more pluralistic in character."¹ Nevertheless, the issue of Regental authority is not yet stabilized. Despite the general movement toward decentralization, the Regents have periodically elected to restore previously delegated authority to themselves, particularly in times of crisis and in sensitive areas—such as the appointment and promotion of politically controversial faculty members—much to the consternation of chancellors and faculties. It might reasonably be asked whether a board, meeting only once a month for a few days, is still a viable mechanism for governing—even at a general policy level—so large and complex a system as the university has become.

The regulation of the remainder of the system has posed even greater difficulties. Until 1960 the entire public education system except for the university—primary, elementary, and secondary education, including junior colleges and state colleges—was under the administrative direction of the State Board of Education, and the chief executive officer of educational activities was the State Superintendent of Public Instruction. As early as the 1930s, however, it became apparent that public education was much too cumbersome to be regulated by that kind of agency. In 1939 the Curriculum Coordinator for the California State Colleges complained that

[the system of control by the State Board of Education] has not been without its difficulties. Some overlappings of functions, some confusion as to policy and some barren areas have resulted. These difficulties could not have been foreseen because the system of educational control was set up before the emergence of present teacher training requirements and standards of certification, before the development of the junior college system and before

1 Arthur G. Coons, *Crisis in California Higher Education: Experience under the Master Plan and the Problems of Coordination, 1959 to 1968*, Los Angeles: The Ward Ritchie Press, 1968.

the state colleges came into being.²

In the postwar period of growth of the junior colleges and state colleges it became progressively clearer that a single state agency could not be an effective governing device for such a complex system. Two of the reforms associated with the Master Plan and its implementation were the creation of a separate Board of Trustees for the state colleges in 1960, and the creation of a separate Board of Governors for the junior colleges in 1967, thus paring back the jurisdiction of the Board of Education to primary and secondary education.

A general process thus seems to have repeated itself in the history of California higher education: the system—or part of it—is placed under relatively centralized governing machinery at some point in its history; as its growth proceeds apace, however, the system becomes progressively less governable by the original machinery, at a certain point a crisis of governance occurs, and, after a period of turmoil, a new, more decentralized governing structure is invented and institutionalized.

The growth of the system has also been punctuated by episodes of intense competition within the segments and among the segments. Many at Berkeley bitterly opposed the establishment of the Los Angeles campus, and, during the deliberations leading to the Master Plan, several chancellors of the existing university campuses expressed apprehension that the development of several new campuses would occasion a decline in resources available to the established campuses. And under the Master Plan, the university campuses have continued to vie with one another for resources, prestige, and power. Berkeley has struggled to maintain its flagship status among the campuses, and the Joint Committee on Higher Education of the California Legislature recently remarked that "University campuses such as Santa Cruz and Riverside are locked into the general University mold which, despite some important differences in organization, emphasis and outlook, forces them to rush ahead in the tracks of Berkeley and UCLA."³ Similar competitive pressures for scarce resources—and a tendency for a more or less equitable response to these pressures on the part of state authorities who control the resources—have also made for a movement toward uniformity and competition-inspired growth within the state college and junior college systems.

Competition among the segments has been much more intense than

2. J. Herschel Coffin, *The Role of the State Colleges in Higher Education in California*, Sacramento: California State Department of Education, Office of Director of Education, 1939.

3. Joint Committee on Higher Education of the California Legislature, *The Challenge of Achievement*, Sacramento: 1969, p. 50.

within the segments. In the 1920s the state teachers' colleges were coming into their own, and the junior college system was developing rapidly; also in that decade California's population increased by almost two-thirds. This combination of population pressure and opportunity to grow gave rise to a brisk "regional college" movement as well as a movement to convert some junior colleges into four-year colleges. This provoked sharp opposition from the university officials, who feared that an unrestricted number of four-year, general-function colleges would be created by the legislature in response to local pressures. The impulse to convert junior colleges into four-year colleges was also felt immediately after World War II.

The most intense period of segmental competition appeared in the mid-1950s. The state was faced with an enormous cohort of school-age children who were about to enter institutions of higher education. Dozens of bills for new colleges, or for changing the functions of existing ones, were introduced into the Legislature on behalf of eager localities between 1955 and 1959. The growth guidelines of the liaison committee of the Board of Regents and the State Board of Education were openly disregarded in the dash for new institutions. Educators in the university, the private sector, and the junior college sector feared that the higher education system would degenerate into a chaotic expansion of state colleges through pork-barrel legislation. And many feared that if the system could not come up with some plan for coordination and rational growth, the Legislature, though ill-equipped to coordinate the system, would nevertheless take matters into its own hands. Such were the problems that stimulated the effort to develop some Master Plan to coordinate the entire system in the late 1950s.

As we shall see, the Master Plan was directed in part at resolving and regulating these competitive struggles. It has proved successful in part. Nevertheless, the competition between the state colleges and the university has continued to the present. The state colleges have launched a multi-pronged offensive to achieve university status, attempting to gain research funds and sabbatical privileges for their faculty, and attempting—and almost succeeding—in securing a change of name whereby they would become California State Universities.

Efforts to Coordinate

Earlier I noted a kind of periodicity in the growth of California's higher education, involving the phases of centralization, growth, crises of governance, and decentralization. A similar cycle has repeated itself with respect to competition and coordination among the segments. This cycle begins with some kind of crisis of competition, this gives rise to some "study commission" or investigation, which attempts to devise a new frame-

work for integration and coordination, next an attempt is made to implement the recommendations, and finally competition begins to develop within the new framework.

To illustrate In the midst of the regional college movement of the early 1930s the Legislature commissioned the Carnegie Foundation for the Advancement of Teaching to conduct a study of the California system of higher education. Among the proposals of this commission was that the Legislature establish a State Council for Educational Planning and Coordination. This was established in 1933, but since it was a purely advisory body, it could not enforce any recommendations regarding the growth and coordination of the system. It was largely ineffectual as a coordinating device, and ceased its activities by 1941.

In 1945 the Board of Regents and the State Board of Education created, on an informal basis, a Liaison Committee which would issue non-binding proposals regarding plans and projects that might affect the system as a whole. The Liaison Committee achieved some success in stemming the movement toward four-year status on the part of the junior colleges, in reaffirming the principles of differentiation among the several segments, and in dampening the growth of new institutions. A proposal to expand and reorganize the liaison machinery was made in 1955, but by that time action of this sort could not be seriously contemplated, because the state had entered the period of competitive chaos of the late 1950s.

The Master Plan for Higher Education marked one of the most comprehensive coordinative efforts in the history of American education. In one sense it represented a great political compromise among the various segments. It provided certain benefits for each. To the junior colleges it afforded a status in the higher education system for the first time, and granted them a major role in realizing the egalitarian goal of a place for every high school graduate in an institution of higher education. To the private sector it also granted a formal place in the planning and coordinating machinery for the first time. To the university it afforded protection for its research and degree-granting functions. And to the state colleges it afforded higher admission standards, the joint doctorate, the extension of master's degrees, its own Board of Trustees, and more liberal policies on faculty research. The one advantage the state colleges did not gain was a constitutional status parallel to that of the university. The colleges still remain the creations of legislative statute. Some now maintain that this was a serious failure. Constitutional status, it is argued, would have given the state colleges a legal status parallel to the university, and would have given them greater budgetary independence from the legislature than they now enjoy. Furthermore, it would have given constitutional delineation to

serve ends too big for any of the associations that had come into being to serve partial needs. The Emergency Council early recognized that the problems of education were chronic and that cooperation would be useful long after the crises of war had passed. By July it had changed its name to American Council on Education. In December of the same year what had begun as a voluntary association of educational councils was modified to include institutions of higher learning as well as associations of such institutions. With that change the ACE had taken on the essential characteristics that have remained with it ever since.

In the first years of the Council's life Donald Cowling was its driving force. He was asked to become its head, refused, but raised the funds and ignited the spark which kept it alive in the first critical months. The first full-time director was Samuel Paul Capen, and his explanation of why the ACE was created sums up well the history and nature of our voluntary unifying agencies:

The development of the American educational scheme has been planless, haphazard. We have always suffered because of this planlessness. The price that we are called upon to pay for our lack of forethought and the consequent lack of system becomes heavier year by year. Unified action has always been impossible because there was no unifying agency. There has been no means even to create a consensus of opinion. A unifying agency has now at last been established. To stimulate discussion, to focus opinion, and in the end to bring about joint action on major educational policy—these are the things that the ACE was created to do. . . . This is the justification for the Council's existence, or there is none.⁵

Following Capen there have been four other devoted and effective executive directors of the Council—C. R. Mann, George F. Zook, Arthur S. Adams, and Logan Wilson. Each has had to wrestle in his own way with the difficult problems that have confronted leaders in education, and each has had to enter the engagement as a voluntarist able to advise and counsel, but denied the force of law or other sanctions. In consequence, it is not surprising that with each reappraisal of the Council's work a chorus crying for stronger action, greater coordination, and increased intervention has been countered by an antiphonal choir—hands off, leave us free!

Conclusion

The difficulties of voluntary leadership have not been ameliorated

5. Charles G. Dobbins, ed., *Leadership and Chronology of the ACE 1912-1962*, American Council on Education, 1962, pp. 7-8.

with the passage of time. Education has been the fastest growing sector of American institutional life. Hundreds of new institutions have been established, with widely varying objectives. The most widely distributed of these new establishments have been the junior colleges, and as might be expected, there is now a flourishing American Association of Junior Colleges with great leverage in Washington since there is scarcely a Congressional District without a junior college or an interest in getting one. But the American Association of Junior Colleges is only the most powerful of a legion of new voluntary societies seeking recognition, thereby increasing the need for coordination or at least the mediating services of the American Council. At a dinner meeting of the ACE, October 5, 1961, Logan Wilson summarized the dilemma of voluntary systemization

These associations are well known to everybody in this room. However, I doubt that anybody here could name more than a fraction of the 512 regional and national educational associations, or the 141 college professional fraternities, honor and recognition societies, or the 413 state education associations, the 50 religious education associations which total more than eleven hundred organizations—nearly all voluntary in nature—having to do in one way or another with American education.

And some years later he commented

Instead of a united effort to resolve the basic educational issues confronting the nation, our collective endeavor is being confused and weakened by vested-interest group pressures, splinter movements, and fragmented approaches.

Whether voluntary enterprise is capable of achieving the long-range as well as the immediate objectives that are required of American higher education—if our nation is to survive and flourish—thus remains to be seen. In any event, more concerted effort is necessary, and we no longer have any option between disjointed *laissez faire* enterprise on the one hand and planned, integrated activity on the other. The only real choice is whether we shall get together and do the job ourselves, or wait for other agencies of public policy to regiment it for us.⁶

System, when self-imposed or developed through voluntary association and unforced consensus, is hazardous. Nevertheless, it has been our way toward system in the United States. What it fails to provide in crispness

6. *Ibid.*, p. 155

and predictability it compensates for by providing variety, flexibility, and resilience. Because there is no bureau to decree order, we sometimes have uncertain moments; but those of us who have worked toward stronger institutions within private, voluntary associations are grateful, because all of our administrative lives we have been invited—indeed compelled—to think for ourselves. The system entails no authority which could substitute its ukase for our own considered judgment. The inner-directed character of American education is a boon we owe to the tradition of voluntary associations.



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FOUNDATION INFLUENCE ON EDUCATION

F. EMERSON ANDREWS

In some respects foundations are unique among American social institutions. They are the only important agencies free from the political controls of legislative appropriations and pressure groups and from the need to temper programs to the judgments and prejudices of current contributors. Therefore, they can attack the long-range, difficult, and often controversial questions that face the nation and the world. They have sometimes been called the "venture capital" of philanthropy.

It is true that only a few foundations have spent a substantial part of their funds in pioneering ventures. But when such spending has occurred, and when it has been in the field of education, remarkable results have sometimes followed modest investment. A number of foundation grants or programs have substantially affected education in the United States, even though the dollar proportions might seem to make the foundation contribution insignificant. Presently, school expenditures in this country are estimated at \$66 billion annually. Foundations' total income is a mere \$1.3 billion, with only a portion of that spent on education.

However, among all the fields that receive foundation grants, education has the highest priority. The Foundation Center, which tries to keep track of all foundations' activities, has just reported on grants of \$10,000 or more recorded in 1971. Education received \$343 million, or 32 percent of all tabulated grants, and a substantial portion of grants listed under Science, International Activities, and Humanities were spent in educational institutions.

Grants to education may take a variety of forms. They may subsidize

"plant" through paying for buildings, books, or other equipment. They may be applied to instruction through endowing a professorship, contributing to salaries, assisting in teacher training, or improving the status of teaching. They may support research. They may directly assist the needy student through scholarships, fellowships, or student loans. Finally, they may finance the study of education itself, its content or its procedures.

What has been the foundation role in these fields?

Historical Perspective

Since the role of foundations in education has changed radically through the years, a bit of history is in order. By coincidence, public education, universities, and foundations appeared in the United States almost simultaneously a little more than a century ago. Free public schools were not plentiful until the Civil War ended in 1865. One authority pinpoints the beginning of the university, as distinguished from the college, at the start of Charles W. Eliot's presidency at Harvard in 1869. The earliest foundation approaching the modern pattern was the Peabody Education Fund, set up in 1867 "to aid the stricken South," which had a strong program in Negro education.

In dollar terms, public education soon far outstripped universities and foundations. Nearly all elementary and secondary education became tax supported, and an increasing number of students—now more than half—went to tax-supported colleges. Foundations never attempted to play a substantial role in supporting primary or secondary education, except for a few private schools or pilot programs.

With respect to higher education, in early years budgets of foundations and government were more nearly comparable. In the first two decades of the present century, a number of large foundations were established, including John D. Rockefeller's General Education Board and The Rockefeller Foundation, and Andrew Carnegie's group of funds, particularly Carnegie Foundation for the Advancement of Teaching and Carnegie Corporation of New York. In 1913 the federal government's total expenditures for education amounted to \$5 million. Carnegie Corporation in that year spent \$5.6 million, so that if it had devoted all its funds to education, it could have more than equaled at least the federal government total—now, of course, incomparably greater.

Experiments with Endowment

Perhaps encouraged by such comparisons, several foundation boards decided that the whole financial problem of the private colleges could be

solved once and for all by building up big endowments and using the income. To encourage such endowments Carnegie Foundation offered free teachers' pensions, but only to colleges with endowment funds of at least \$200,000 (\$500,000 after 1921). General Education Board contributed \$60 million to the endowment of 291 colleges and universities under matching provisions that would mean an additional \$200 million for such funds.

But college needs grew faster than endowment income. In its report for 1925-26, General Education Board acknowledged that higher education had less per student than a quarter of a century earlier when measured in purchasing power. It abandoned contributions to endowment and progressively removed restrictions on its past endowment gifts.

Of course endowment funds are useful, and college boards encourage such giving. But the limited resources of foundations cannot thereby solve the college support problem, and most foundations decline to give "six-cent dollars" (if that is the investment income rate) in favor of programs that seem more immediately rewarding.

Support for Libraries

Books have been prized possessions in America from earliest colonial times. Foundations have played a substantial part in supporting public and college libraries. Perhaps Andrew Carnegie, first as an individual and then through his largest foundation, had more to do with the mushroom growth of public libraries in this country than any other person. He says in his autobiography

It was from my own early experience that I decided there was no use to which money could be applied so productive of good to boys and girls who have good within them and ability and ambition to develop it, as the founding of a public library in a community which is willing to support it as a municipal institution.¹

He began with a library for his village birthplace in Scotland. In the end he gave, personally and through Carnegie Corporation of New York, some \$56 million to build 2,509 libraries, 1,681 of them in the United States. His gifts usually carried the condition that the community furnish a site for the building and guarantee annual support for the library of not less than 10 percent of the cost of the building.

After surveying the effectiveness of libraries, the corporation in 1926 embarked upon large-scale expansion of its library program. It stressed the training of librarians, particularly in terms of establishing standards, supporting library schools, and offering training fellowships. It financed prepa-

¹ *Autobiography of Andrew Carnegie*, Boston: Houghton Mifflin, 1920, p. 47.

nation of an architectural handbook on library planning and design. It experimented with supplying books to rural areas through traveling libraries. It supplied selected books to impoverished libraries. Carnegie Corporation has been associated with substantially every major development in library service in the United States and in most parts of the British Commonwealth. Its comprehensive report on its library program put its contributions for library services at \$33 million by 1961.

Numerous other foundations have contributed substantially for libraries, particularly in colleges. These contributions have been toward new buildings, special collections, and sophisticated learning tools. The Foundation Center's tabulation of grants of \$10,000 or more for libraries shows 139 grants totaling \$10 million for 1971.

Pensions for Professors

Andrew Carnegie became greatly concerned over the financial plight of college professors in the early part of this century. In 1904, for example, professors in large state universities received an average salary of \$2,000 a year. No provision was made for retirement income. In 1905 the philanthropist set up Carnegie Foundation for the Advancement of Teaching with an original endowment of \$10 million, primarily to supply retiring pensions for teachers at universities, colleges, and technical schools.

He and his advisors again grossly underestimated the amount of money required. In spite of later additions to endowment, his foundation was soon unable to fulfill its commitments. It had to borrow money from Carnegie Corporation, close its own rolls, and eventually assist in setting up a new instrument, the Teachers' Insurance and Annuity Association. This organization does, indeed, provide retirement annuities, but from funds contributed, sometimes wholly by the college, sometimes with the employee paying a portion.

The foundation had other immediate effects upon education not fully foreseen. Obviously, college had to be defined in a period when degrees were granted by mail and by schools with standards scarcely up to the high school level. So the foundation required an admissions standard for students of not less than four years of academic or high school preparation, or its equivalent, further defined by units of work; a four-year college curriculum manned by at least six (eight after 1921) full professors; the doctoral degree for all department heads; and in private colleges the already noted endowment of \$200,000 (later \$500,000). These qualifying conditions were as effective lever in raising college standards, since the colleges needed to meet foundation requirements both to secure a free pension system and to retain their professors.

A small portion of the foundation funds were used for a Division of Educational Enquiry, marking a shift in emphasis which experience has prompted in many other foundations. The pensions, even when later curtailed, demanded many more millions than Carnegie originally intended or gave. The research program, helped by grants from the Carnegie Corporation, never had substantial funds, but it made outstanding contributions to higher education. Chief among these was *Bulletin 4, Medical Education in the United States and Canada* by Abraham Flexner, which found American medical schools scandalously lax, many mere diploma mills. *Bulletin 4* recommended that 80 percent of all existing schools be scrapped and that substantial new funds be granted to the remaining schools to improve their standards. Many of those funds came from other foundations, John D. Rockefeller gave his General Education Board \$45 million for medical education between 1919 and 1921. But it was the small research investment in *Bulletin 4* which touched off the reform that lifted American medical education to admired heights.

Salaries for Professors

Into the 1950s the salaries of college professors remained at uninviting levels while the number of students explosively expanded. In the mid-1950s American physicians averaged \$15,000 a year; the median salary for all professorial ranks was \$5,243.

In 1955 trustees of the new large Ford Foundation decided on a dramatic stroke. Just before Christmas they announced the largest single gift in the history of philanthropy—\$500 million. Of this total, \$200 million went to hospitals and \$90 million to privately supported medical schools. The remaining \$210 million was granted to the 630 privately supported, accredited, four-year colleges in the nation, and for ten years it functioned as endowment, with income devoted to increasing professorial salaries. Earlier in the same year, The Ford Foundation awarded \$50 million to a selected group of 126 colleges in recognition of special efforts already made to improve the status and compensation of their teachers.

Even these vast sums, using income only, could not by themselves result in any substantial increase in college payrolls. The president of The Ford Foundation, H. Rowan Gahler, carefully emphasized that the grants met only a small fraction of the need, and that they were intended to stimulate, rather than discourage, greater support.

The Ford Foundation has been careful to make no large claims for this program. But it did bring nationwide attention to the problem, stimulate giving from other sources, and make many trustee boards consider more seriously the salary item as a part of their total budgets. In dollar figures,

the median salary for all ranks rose from \$5,243 in the academic year 1955-56 to \$6,700 in 1959-60. The median for full professors during the same period rose from \$7,100 to \$9,100.

Many other foundations have earmarked grants to colleges for salary purposes, sometimes in general, sometimes in the form of endowed professorships in special subject areas.

Toward Academic Excellence

Another and even larger Ford Foundation program to benefit education began in 1960. Called the Special Program in Education, it promised large grants to selected colleges and universities to assist them in reaching and sustaining new levels of academic excellence, administrative effectiveness, and financial support. The institution was required to submit detailed plans for five and ten years, and to match the promised grant on a two-for-one or three-for-one basis. Spending of the funds, both the grants and the matching amounts, was not dictated, but The Ford Foundation called attention to

the three pillars of academic improvement—better students, first-rate faculty, and adequate facilities where the two groups can work together.²

A total of 77 colleges and universities were included in the program after six years when the rolls were closed. The grants amounted to \$349 million, the matching funds will amount to \$991.8 million, although a few colleges have not yet reached the required matching total. However, the great leverage such grants have given the fund-raising arms of the colleges has usually resulted in gifts, chiefly from corporations and alumni, considerably exceeding the required goals.

Student Assistance

Student aid has been a major interest of many foundations and sometimes their sole chartered purpose. Such aid may be offered as an undergraduate scholarship, based on need, a competitive examination, or other selective device; a student loan made with the expectation that the principal, often with interest, will be repaid; or a fellowship, usually restricted to graduate study by scholars of proven ability or to advanced work that may be conducted entirely outside academic circles.

The scholarship concept has changed radically in recent years, with the emphasis shifting from scholastic merit to financial need. This shift

2. *Toward Greatness in Higher Education. A First Report on The Ford Foundation Special Program in Education*, New York: The Ford Foundation, 1964, p. 18.

largely reflects the extraordinary increase in the costs of college education in the United States. From 1636, when Harvard was founded, until 1659, the total expense for graduates, including four years' residence in the college, ran from \$100 to \$200. Presently, in comparable private colleges, the four-year cost is in the neighborhood of \$14,000. A few foundations still give scholarships as awards for excellence or for special purposes without regard for need, but most awards are predicated on financial need. They are more nearly grants-in-aid than scholarships.

Precise figures are not available on foundation aid to students, but the total is now relatively small, with the federal government the chief financial resource. However, some programs handled with skill retain special value, for example, the fellowships awarded by the John Simon Guggenheim Memorial Foundation.

Foundations have also played a major part in organizations that promote or supervise scholarship plans. In 1955 The Ford Foundation made an initial appropriation of \$20 million and Carnegie Corporation of New York \$500,000 to set up the National Merit Scholarship Corporation. This organization holds nationwide contests annually among high school students to select merit scholars, who receive four-year scholarships, provided marks are maintained, in the college of their choice. Administration costs of the organization and, in the earlier years, many of the scholarships came from original endowment. But the purpose was primarily to provide a vehicle for scholarship management which could be used by any corporation or individual who wished to devote funds to this purpose. For the 1969-70 academic year, this organization had 11,000 scholarships in effect and over 20,000 alumni.

Similarly, foundations have had a large part in the central financing of such organizations as the Social Science Research Council, which grants and administers fellowships and special research programs in the social sciences.

Many foundations have influenced the content of education, sometimes through commissions studying particular problems, sometimes through financing research, sometimes through grants to support programs that institutions could not otherwise afford. Some studies have begun with kindergarten and even with the preschool child. Carnegie Corporation of New York helped prove that children had the ability to learn earlier than had previously been thought. The same foundation financed a study on teaching mathematics which played a substantial role in the revolutionary change to new math. At the secondary level, it financed extensive research by James B. Conant, former president of Harvard University, which resulted

in the Conant report, *The American High School Today*, called the key to the reformation of American secondary education.

Aid to the Disadvantaged

Special attention to Negro education began with the Peabody Education Fund over a century ago. General Education Board channeled over \$60 million into the predominantly Negro colleges between 1902 and 1960. But the plight of the disadvantaged, including not only blacks but also Puerto Ricans, poor whites, and other minorities, began to receive concentrated attention from many foundations in the 1960s. Much of the emphasis has been on education in the lower schools, but special efforts have been made to equip a larger proportion of the disadvantaged for college and to improve teaching in the predominantly Negro colleges. Among the many foundations supporting a wide variety of programs for the disadvantaged are the Ford, Rockefeller, Danforth, Taconic, Alfred P. Sloan, and Mary Reynolds Babcock Foundations, and Twentieth Century Fund.

Long-supported programs were often given an added dimension in favor of minority groups, for example, the Woodrow Wilson National Fellowship Foundation's program to encourage college graduates to become teachers, by financing their first year of graduate study, was supported by The Ford Foundation from 1957-1971. It received additional funds from The Rockefeller Foundation to send fellows to some 40 southern predominantly Negro colleges as teachers. In October 1971 the Ford Foundation announced a six-year grant program of \$100 million to aid a limited number of predominantly black private colleges and to provide various minority students with individual study awards.

International Education

A number of foundations, but particularly Ford and Rockefeller, have supported international education. Many of their programs represent money spent overseas, but they also include support within the United States of area studies and international exchange of students and teachers. Carnegie Corporation and the Ford, Rockefeller, and other foundations have liberally supported programs, usually at the graduate level, focused on Asiatic, African, and other peoples and civilizations.

The Institute of International Education, founded in 1919 by Carnegie Endowment for International Peace, still receives substantial foundation grants. In the 1970-71 academic year it administered grants enabling 5,800 foreign students to begin or continue studies in the United States.

Adult Education

Educational growth is a lifelong process, and much of it may be nourished outside formal school and college programs. The foundations' part in the spread of public libraries has already been noted. Similarly, foundations have strongly supported museums and, in some cases—the Solomon R. Guggenheim Museum in New York City, for example—are wholly responsible for such institutions.

Russell Sage Foundation proposed use of existing school facilities for recreation, adult education, and other community activities as early as 1910, when it published *Wider Use of the School Plant* by Clarence A. Perry. But foundation involvement in adult education really began in 1924 under the vigorous promotion of Frederick P. Keppel, who initiated a series of national studies by Carnegie Corporation of New York while he was president. The American Association for Adult Education was established in 1926 and for many years was supported chiefly by Carnegie Corporation funds. It served as a clearinghouse for information in the field, assisted enterprises already in operation, helped organizations and groups to begin adult education activities, and aided and advised individuals who desired to continue learning by themselves.

Many other foundations have initiated or supported adult education activities. The Charles Stewart Mott Foundation has liberally financed special programs in the schools of Flint, Michigan, with the hope that they may be copied elsewhere. W. K. Kellogg Foundation, subscribing to the belief that access to higher education is as much the right of adults as of children and youth, began in 1931 educational projects for adults, particularly in the health field, and from 1951-67 financed nine Centers for Continuing Education at universities, spending more than \$16 million.

The Ford Foundation expressed strong interest in the field by establishing a separate Fund for Adult Education to advance the idea and the practice of continuing liberal education in the United States. Organized in 1951, it received \$47.4 million in grants from Ford. In 1961 it concluded operations, with its interests assumed by the educational division of The Ford Foundation. Its expenditures included more than \$10 million to colleges and universities for adult education programs; some \$13 million to national organizations in the field, such as the Foreign Policy Association, Great Books Foundation, and American Library Association, about \$3 million for miscellaneous research and conferences, \$2 million for fellowships and special studies, over \$12 million for educational television, and the balance for other projects and administrative costs.

Educational Television

In the early 1950s television was still new in the United States, although its potential for education was obvious. No channels were allocated for educational television until 1952, when the Federal Communications Commission set aside 242 channels for such use, but with the provision that unless they were effectively in operation by June 1953, they could be challenged. The Fund for Adult Education made educational television, both development of stations and program content, an emergency interest. By 1961 over 55 noncommercial education television stations were reported in operation.

Meanwhile the *Fund for Adult Education* and The Ford Foundation's other educational offspring, The Fund for the Advancement of Education, were busy with efforts to use effectively this explosive new medium of communication. To train professionals and to develop programs and techniques for speedy nationwide program transmittal, both The Fund for the Advancement of Education and The Ford Foundation contributed additional millions of dollars. Together they were the chief support for Continental Classroom, which broadcast college-level courses by famous lecturers and claimed an audience of more than a quarter million at 6 30 in the morning. An experimental Midwest Program of Airborne Television Instruction was carried by a plane circling over Purdue, Indiana to demonstrate regional teaching from the air.

New transmission techniques promise for the 1970s vast use of this means of teaching, both in regular classrooms and as an arm of adult education, and a number of foundations are supporting experiments. Thus far classroom use has been less than anticipated, due in part to resistance from tradition-bound teachers and administrators and in part to equipment costs. Programs for adults are steadily expanding. The Ford Foundation announced in February 1971 a new grant of more than \$9 million to the Educational Broadcasting Corporation for national and local programming through mid-1972. Additional grants continue to support public television newspaper-of-the-air programs and the Corporation for Public Broadcasting.

General Planning

At various times foundations have supported commissions or special studies designed to look at the field of higher education or, indeed, the whole educational picture and, after evaluation of present practices, to make recommendations for the future. Typical of such programs was the America at Mid-Century Series begun by Rockefeller Brothers Fund in an attempt to assess the major problems and opportunities likely to confront the United States over the next 10 to 15 years. This special panel on education based

its report in 1958 under the title, *The Pursuit of Excellence: Education and the Future of America*. Carnegie Corporation of New York, which has made education a central concern over its long history, has supported special commissions or studies on educational television and higher education and, notably, Gunnar Myrdal's study on the Negro in America.

Foundations, with their limited resources, are unable to contribute heavily toward solution of private education's vast dollar problems, now entering a crisis phase. But their modest resources have been productively invested in experiments with new methods, in pilot projects, and in fundamental research.

True, some of these projects have failed. Handsome buildings, usually bearing the name of the donor foundation but with no endowment for maintenance, have sometimes proved a heavy financial drain, and a few colleges have had the wisdom to decline them. With initial grants, foundations have sometimes induced colleges to set up special courses or programs and then withdrawn support. In these and other ways, a few have endeavored to use the leverage of financial aid to push colleges in directions the colleges have not desired.

Such exceptions aside, foundations have played a constructive role in the progress of education in the United States. They would be the first to deny that dollars alone have been responsible. Dollars are required, but they must be germinated into greatness by men. It is here that the foundations have exerted unusual leverage. They have often been able to select talented persons with creative ideas and give them time and tools and a place to work.



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SPECIAL INSTITUTIONS IN SYSTEMS OF HIGHER EDUCATION

WILLIAM W TURNBULL

The president of an American university observed some years ago that one of the greatest dangers of educational planning is that it might result in a plan. Planning itself is worthwhile, but there is something about *A Plan* that is truly ominous, he said—something that suggests rigidity, conformity, or lack of spontaneity.

This attitude may help explain the peculiar American system of higher education, which has evolved in a most spontaneous way with an almost total lack of planning. It may also account for what I've chosen to call here the "special institutions" within that system—those institutions that are not colleges or universities, educational associations or organizations, or foundations, but which are related in one way or another to all of them. In most cases these institutions have evolved out of the accidents of history, created for the most part to fill in the gaps and maintain continuity in a system of higher education that has grown as rapidly and as haphazardly as the nation itself.

The irregular pattern of American higher education was shaped by the needs of the church, the influence of European cultural traditions, the independent spirit of a young country, and a rapidly changing social and economic order. Before the Revolutionary War, the nine colleges in the colonies patterned themselves after the resident colleges of the great British universities and were largely the result of an urgent need for a literate, college-trained clergy. The aim of these colleges was to preserve and transmit those aspects of Old World culture the colonists felt to be most important.

In the next century, as the forests retreated, the American settlers—

unhindered by the control of any national ministry of education or state church, and fired by the ideal of equality through education—went off in every direction to build the kinds of colleges they thought best for their purposes. This college building accelerated during and after the Civil War when an act of Congress gave federal support to the establishment of new colleges on the vast tracts of land then being settled in the West. As these land-grant colleges developed, new kinds of courses were introduced to meet the pressing demands of the frontier. As a result, subjects such as forestry, agriculture, and engineering came to enjoy the same academic status as law, theology, or medicine.

While colleges in the West were expanding their curricula to prepare their students for careers on the frontier, educators in the East were agitating for a totally different kind of education. As American society grew more urban and industrial, new specialized skills in many professional and scientific fields were needed. This need, coupled with the growing enthusiasm among influential educators for the kind of scholarship and research then found on German campuses, set in motion the movement to establish universities that could offer better facilities for professional training and for advanced graduate instruction. This movement resulted in the creation of whole new universities, such as Johns Hopkins in Baltimore and the University of Chicago, as well as the establishment by many colleges of comprehensive programs of graduate studies in the arts and sciences patterned after those then offered by the University of Berlin and other European universities.

In the middle of the present century, American higher education took a step in still another direction with the introduction of the two-year community college. In a report to President Truman in 1947, the members of a special advisory commission on higher education proposed that free public education in the United States be extended upward to include two years beyond secondary school and that each state establish free-tuition two-year colleges emphasizing terminal (nondegree-granting) programs but also preparing those students who wanted to go on to four-year colleges. This notion of community colleges turned out to be enormously popular. Two-year colleges now enroll about a quarter of the total number of enrolled students in higher education in the nation.

As a result of developments such as these, American higher education today offers the student the choice of an incredible diversity of institutions. There are large public universities with their many undergraduate programs, their professional schools of medicine, theology, and law, and their graduate schools. There are small liberal arts colleges that provide four-year courses of general studies in the arts and sciences (in many ways

similar to the last two years of a *Gymnasium* or *lycee*) There are the two-year community colleges, colleges affiliated with the church and those that are not, colleges that admit all applicants and those that admit only two out of every ten; colleges that specialize in training teachers, musicians, clergymen, pharmacists, or undertakers.

If a student is gifted in mathematics or science, he has a choice of public and privately owned, two-year and four-year institutes of technology where he can pursue a bachelor of science or bachelor of arts degree. If he is inclined toward a career in business, he can study business administration at an undergraduate college or earn a master's degree in that field at a graduate school of business. If he cannot study by day, there are night schools and institutions that conduct courses by television or by mail. If he wishes still less formality, there are adult education centers and what are known as "free universities" that offer informal educational programs in group interaction. Even if he is not interested in education at all he may still find something of interest in the array of bureaus, institutes, reading and speech clinics, agricultural experiment stations, machine-testing laboratories, and the hundreds of other nonacademic services and activities that characterize American higher education today.

From time to time, institutions of various kinds have been added, like outriggers to a canoe, to give this sprawling, complex system better balance and make it run more smoothly. These institutions have become almost as diverse as the colleges and universities themselves and describing them all would require volumes. In this discussion, therefore, I shall describe just a few that have served rather special functions within the American system of higher education.

College Entrance Examination Board

Over the years, American educators have, on occasion, joined together to establish institutions for their mutual benefit. One such cooperative effort resulted in the College Entrance Examination Board, which was founded in 1900.

It would probably be difficult for a modern European university student—or even an American one for that matter—to comprehend the complexity of college admissions requirements and procedures in the United States at the end of the last century. Unlike universities in Europe or England which were willing to recognize standardized examinations such as the *Abitur*, or standard documents of graduation such as the General Certificate of Education, colleges and universities in America each had their own set of entrance requirements. For example. In 1895, Columbia University required that its candidates for the freshman class be prepared to

be tested in six books of the *Aeneid*. In addition to these, Yale University required the *Eclogues* and Princeton the *Georgics*. Princeton demanded no science preparation, but Columbia required training in physics and chemistry while Yale required botany. In addition, each university administered and graded its own entrance examinations in different ways. A student had to decide early in his secondary school career which university he wanted to attend since the preparation required by each was quite different. If he later changed his mind, it was too late to qualify for a different college. And each school had to cope with the quite different preparation of students who were planning to go on to different colleges with their own specific entrance examinations.

By 1899 this situation had created such tension between the colleges and secondary schools that the members of an organization of educators on both levels took matters into their own hands by creating a membership organization that would serve them all. The new institution, known as the College Entrance Examination Board, was charged with the responsibility of establishing and maintaining uniform examinations for college admission and uniform administration of those examinations, although each college was free to set its own standards for matriculation.

Since that time, the College Board's membership has grown from 12 colleges and schools to more than 1,500 public and independent colleges, universities, secondary schools, public school systems, and associations. Its purpose remains basically the same—to provide a forum and services through which the American educational community can facilitate the transition from secondary to higher education.

Today, although colleges and universities in America have still not established uniform entrance requirements (and probably never will), more than 900 require their applicants to take the College Board Admissions Tests. In addition to these tests, which are taken by some two million students throughout the world each year, the College Board offers a number of other testing programs and services, all designed to make the transition from secondary school to college or vocational school a little easier. The Preliminary Scholastic Aptitude Test, for example, is a guidance instrument designed to give students in the eleventh grade an indication of how they will perform on the college entrance examinations they will take as twelfth graders. Scores on this test are frequently used to help students decide whether or not they will go to college. The Advanced Placement Examinations are taken by advanced students in secondary school to earn credits toward graduation or advanced placement, or both, in the colleges or universities they enter. In contrast to these programs, which serve students

who move in traditional ways from secondary school to college, the Board offers the *College-Level Examination Program* for adults who never finished their university education, for students who are transferring from one college to another, or for people who never went to college at all. Scores on these examinations are used to earn credit at a university or advancement in one's career.

In another area, the *College Scholarship Services* operates as a special institution within the special institution of the College Board. The CSS offers a number of services to help colleges and other scholarship donors administer their scholarship programs. In particular, it calculates the amount of financial aid a student will need to meet the costs of a college education.

An essential function of the Board has been for many years to serve as a forum for discussion and debate on matters of college admissions. The annual meeting of the Board's membership, the colloquiums, the many regional conferences held during the year, the workshops, and the Board's publications all serve as a means of communication among representatives of secondary and higher education.

At the time the College Entrance Examination Board was founded, college-going in America had become a fashionable thing to do among the middle and upper classes. And as the college population grew larger and more heterogeneous, the problems of advising and supervising students grew with it, so that by the end of the nineteenth century many colleges and universities were hiring specialists to devote all their time to problems and affairs of their student personnel. This trend, coupled with a new enthusiasm for the behavioral sciences and the use of psychological tests by the Army in World War I, led to a growing interest in mental testing, which increased throughout the decades of the twenties, thirties, and forties. By the end of World War II, the widespread use of tests in higher education had created such a problem of overlapping and duplication of testing programs that three of the major testing organizations—the College Board, the American Council on Education, and the Carnegie Foundation for the Advancement of Teaching—appointed a committee of distinguished educators to study the situation and advise them on it. In their report, the members of the committee emphasized that continued overlapping in testing would impede its scientific development, that none of the three organizations could furnish proper leadership in the field or had the funds to support an adequate research program. The committee therefore recommended the creation of a single testing agency within which the testing activities of the three organizations would be continued and expanded.

Educational Testing Service

Thus, in 1948, the three groups combined their testing funds and staff to establish a nonprofit agency that would assume responsibility for the testing programs of its founders, leaving them free to pursue their activities and services in other areas of education. They called the new organization Educational Testing Service.

Unlike the College Board, which provides direction and coordination for its member schools and colleges, Educational Testing Service (or ETS, as it is more often called) provides services for all levels of education. These include administering the testing programs of its founders as well as those of many other organizations, developing tests, serving as a source of information and instruction for schools, colleges, and individuals on testing and the selection, use, and interpretation of tests, and conducting research in the fields of education and measurement.

The testing programs administered by ETS span all levels of education from the first grade through graduate school. In addition to the various testing programs of the College Board described earlier, ETS administers the Secondary School Admission Test, which is designed to measure the scholastic ability of students applying for admission to grades seven through twelve. At the graduate level, there are programs such as the Law School Admission Test, the Admission Test for Graduate Study in Business, and the National Teacher Examinations, which are widely used to aid in the selection of teachers for employment.

ETS is also deeply involved in educational programs designed to increase understanding among educators and the general public of tests and testing. Staff members spend much of their time in schools and colleges visiting with educators and talking about their testing needs. At its Princeton office and in several of its branch offices, ETS conducts seminars, workshops, conferences, training programs, and less formal activities throughout the year for students, educators, and others interested in educational measurement.

One of the most important responsibilities of Educational Testing Service is its commitment to research. Today ETS has more than 150 studies under way, studies that focus upon the phenomena of human development and behavior and ways of describing and measuring them. Those who work in the Division of Psychological Studies investigate various aspects of human growth and development, the relationships between individuals and their environment, and the theoretical foundations of measurement. Staff members in the Developmental Research Division engage in studies related to education at all levels in such areas as early learning, individual development, guidance, higher education, teacher be-

havior, educational technology, and occupational training. Still another division—Educational Studies—specializes in research and evaluation projects related to current problems affecting education at local, state, and national levels. Staff members in this division work in the field with educators in schools, school systems, governmental agencies, and other similar groups to assist in planning and conducting studies aimed at improving educational programs and processes.

Like many private colleges and universities, Educational Testing Service is a nonprofit corporation that belongs to no one person or institution. Unlike colleges and universities, however, ETS is not subject to the pressure of alumni or students. Although it administers testing programs for the federal government, it is entirely independent of its control. It is governed by many people in many ways. Its policies are directed by a board of 16 trustees representing many areas of education. The policies of the trustees are carried out by 14 officers who are employees of ETS. Several advisory committees, made up of educators, testing and guidance leaders, and other experts in various fields, work closely with ETS to help plan its activities. More than 2,100 school and college teachers work with ETS specialists in developing tests.

Most ETS testing programs are conducted for sponsoring groups or under the direction of committees of educators who decide policy. The Graduate Record Examinations program is a good example. These examinations, which ETS took over from the Carnegie Foundation for the Advancement of Teaching, are designed to assist graduate schools and departments in the selection of qualified students for admission to graduate study. General policy for this program is the responsibility of the Graduate Record Examinations Board, a body of 16 members, each of whom is associated with graduate education. This board determines the nature of the tests and the manner in which they are made available to graduate schools and students. It also determines the nature of the services to be provided in connection with the tests and directs the undertaking of research to improve the tests and their usefulness to graduate schools. ETS, as the GRE Board's executive agent, develops and administers the examinations, conducts research programs for use in the GRE program, provides technical advice on testing matters, and helps in the formulation of proposals.

When Educational Testing Service first opened its doors, it consisted of 100 dedicated people working over a clothing store in the town of Princeton, New Jersey. Today, 23 years later, ETS consists of 1,644 dedicated people who work in a complex of buildings on a 380-acre country site outside of Princeton and in regional and field offices in California, Illinois, North Carolina, Texas, the District of Columbia, and Puerto

Rice. It is, however, still a unique organization—a truly special institution where educators, psychologists, data processing specialists, artists, editors, lawyers, and secretaries work cooperatively to put the science and art of measurement at the service of education.

Carnegie Foundation for the Advancement of Teaching

Shortly after the beginning of this century, Henry S. Pritchett, President of the Massachusetts Institute of Technology, paid a visit to Andrew Carnegie, the steel magnate and philanthropist, at his summer home in Scotland. When Carnegie asked why he was in Europe, Pritchett replied, "I am searching for a \$25,000 professor at a \$7,500 salary."

Actually Pritchett was not exaggerating. Carnegie, who was a trustee of Cornell University, was deeply shocked at the smallness of faculty salaries and had for some time been planning a method of providing retirement allowances for teachers in colleges and universities. Soon after Pritchett's visit, Carnegie established the Carnegie Foundation for the Advancement of Teaching and persuaded Pritchett to become its first president. From the interest on a grant of \$10 million, this foundation provided professors who had taught a minimum of 15 years with a free pension of 60 percent of their salary by the age of 60 and half that amount to their widows.

TIAA

After ten years, however, the Carnegie pension plan was in serious trouble. Both benefits and beneficiaries were increasing at a rate that was out of proportion to the original scale of disbursement; moreover, life expectancy was rising while interest rates were declining. More disturbing to many in the Foundation was the bad feeling many educators had about the pension plan which they felt was favoring the larger "leading" colleges and universities in the Northeast. As a result, in 1918, the Carnegie Foundation established the Teachers Insurance and Annuity Association (known as TIAA), a special institution for all those who work in the field of higher education including teachers, scientists, researchers, and administrators. Under this plan, which was based on the principles of insurance rather than philanthropy, each professor contributed up to 5 percent of his annual salary toward his pension and life insurance, and his college contributed a matching amount. Since the employing institution had no equity in the investment, the teacher was free to take his savings with him if and when he transferred to another college.

Even with a guaranteed cash income, however, the retired professor

could not be certain of any real security with the purchasing power of the dollar dropping each year. A survey of college faculty salaries conducted in 1954 illustrates this dramatically. According to the survey, the average annual salary of professors at state universities and land-grant colleges rose from \$2,000 in 1904 to \$7,000 in 1954. In terms of the 1904 dollar, however, \$7,000 in 1954 had the purchasing power of \$1,956. Thus, in 50 years, the professor's salary had actually decreased by 2 percent.¹

CREF

In an attempt to guard against such diminished income at retirement, the TIAA established the College Retirement Equities Fund (known as CREF) in 1952. This plan enabled the faculty member to allocate between 25 and 75 percent of his total annual premium for the purchase of shares of stock, leaving the remainder invested in his TIAA cash annuity. In this way, his common stocks, which tend to rise during times of inflation, would balance his cash income which tends to remain steady during times of deflation.

In 1956, the TIAA initiated two additional plans for its members: a medical expense plan designed to help meet the expenses caused by severe illness, and an insurance plan for the disabled which provides monthly payments of up to 60 percent of the teacher's salary until retirement.

These two special institutions play an important role in our system of higher education. Their special retirement and insurance arrangements, available only to staff members of nonprofit educational organizations, have given the teaching profession the kind of security it long has needed to attract competent and gifted professionals. Andrew Carnegie would be pleased, I feel certain.

In this brief talk, I have described three institutions within the American system of higher education that were established to help keep the system running smoothly. There are many other types—hundreds probably—and in the future, as the American system of higher education becomes even more diversified, there will be many more. For as Phillip Coombs pointed out so forcefully in his book, *The World Educational Crisis*,² educational systems, while they have grown more rapidly than ever

1 Cited by J. S. Brubacher and W. Rudy, *Higher Education in Transition. An American History 1636-1956*, New York: Harper & Brothers, 1958, pp. 366-367 (First Edition). Original source: B. Ruml and S. G. Tickton, "Teaching Salaries Then and Now," *Bulletin* No. 1, New York: Fund for the Advancement of Education, 1955, pp. 29-47.

2 Phillip H. Coombs, *The World Educational Crisis*, New York: Oxford University Press, 1964.

before, have nevertheless adapted much too slowly to the revolutions that have whirled about them since World War II. If this crisis is to be met, there must be substantial adjustment by both society *and* education. As Coombs observed, "Educating a nation, and keeping that nation's educational system in step with the times, seems to be many times harder than putting a man on the moon."

The need for special institutions has never been greater

NATIONAL SYSTEM ABROAD



Sir John F. Wolkenden is director and principal librarian of the British Museum and chairman and life trustee of the Carnegie UK Trust. It is his former position as chairman of Britain's University Grants Committee from 1963 to 1968 that particularly qualifies him to present the following lecture, however Sir John has also been vice-chancellor of Reading University (1950-63) and headmaster of Uppingham School (1934-44) and Shrewsbury School (1944-50). He received his higher education at Queens College of Oxford University, first as a Harbidge and then as an Akroyd Scholar, and later as a Henry P. Davison Scholar at Princeton University, in the United States. He has authored a number of published works, predominantly in the field of education.

GREAT BRITAIN

SIR JOHN F. WOLFENDEN

The University Grants Committee is what many people would call a "typically British" institution. They mean that on the face of it, it is illogical, irrational and untidy. The answer is that while it may deserve all those adjectives, the fact is that it works—like a good many other institutions which are called "typically British."

The first point that must be made is this. In Britain we do not have the broad distinction that there is in the United States between private and public universities. We do not have a group of private institutions, like Harvard, Yale, and Princeton, which depend for the bulk of their income on endowments and tuition fees, and then a different and separate group of the great state universities, which depend largely on funds voted to them by their state legislatures. Our universities in Britain—Oxford and Cambridge as well as the newest institutions—are all alike in one respect, however much they may differ in others. They all derive something like 90 percent of their capital budget and 85 percent of their operating budget from the Exchequer, that is to say, from federal funds. Some have more endowments than others, but endowment income and income from tuition fees together make up a tiny percentage of their annual budgets.

The second point I must make follows from the first. You might expect that this dependence on the government for money made the universities dependent on the state in other ways, that they were controlled by the state, and that their academic freedom, as institutions and as individuals, was bound to be limited by this financial and economic fact. One of the main reasons for the existence of the University Grants Committee is precisely to ensure that this does not happen and to protect and preserve the academic freedom of the universities. It stands between the university

ensure that they did not get out of hand. Certainly it is extremely valuable to have experienced civil servants bringing their expert knowledge of governmental procedures to the Committee's service. And there is a long and stern tradition that when they join the UGC's office the loyalty of these men and women is totally given to the UGC, whatever government department they have come from. I have seen some splendid battles between the Committee's civil servants and men who a few months before had been their close colleagues in the Department of Education and Science.

One other possible suspicion must be cleared out of the way. All the members of the UGC are appointed by the Secretary of State for Education and Science, so there could be a suspicion that in some sense or other the appointments were political. I can assure you that this is not so. I myself was appointed by a Conservative government. I served under governments of both parties and under a bewildering succession of ministers and secretaries of state. At no time was the question of my party affiliation ever mentioned—which is just as well, because I do not know what my answer would have been. Similarly, when names were being discussed for appointment to membership of the Committee, at no time was that question raised about them. I simply did not know, looking round the table, to which political party, if any, my colleagues belonged. Still less did any of us go out of office when there was a change of government.

Recurrent Grant

Well, so much for the membership of the University Grants Committee. What does it do? Primarily and fundamentally, it distributes among the universities the public funds which the government has agreed to allocate to them. But there is a stage before this. Before it can distribute the money, the UGC has to get it from the government. And that can be the hardest part of the whole operation. Let me try to explain how it works.

For purposes of the operating budget—what we call recurrent grant—the government and the UGC work on the basis of a five-year period. Eighteen months or so before the end of an existing five-year period, the UGC writes to each university and says something like this. Will you please tell us what expenditure you expect to incur in each year of the forthcoming quinquennium? You should state this in terms of (a) your present commitments in, for instance, staff salaries, and (b) new developments you want to start, with estimates of their cost. We want to know, please, in exact detail, how much money all this will cost you in each year of the coming quinquennium, together with all your other annual expenditures on building maintenance, administration, nonacademic salaries, the lot. And we should also like to know, please, particulars of

your income from all sources other than government grant. When this letter is received in each university, a period of intense (and intensive) activity begins. It is a salutary discipline that once in five years each university should have to stand back from itself, do rigorous self-examination, and decide on its priorities—and then write it all down in intelligible form.

Eventually each university replies, and there follows a short period during which the officers of the UGC and the officers of the 44 universities are in touch with each other to clarify and sort things out. Then, when all is clear, the UGC makes a submission to the government. It does not simply add together the amounts requested by each university and send the total as its submission to the government. Each university, you must remember, has sent in its proposals without knowing what other universities have proposed. So you could get a situation in which each one of three universities within a hundred miles of each other had asked for money for new departments of astrophysics or agricultural economics or Chinese language and literature. Then it becomes the UGC's business to exercise an academic judgment about each of the universities concerned and to decide whether it should ask the government for money to enable one or two or all three of the universities to do one or two or all three of these things. To help it in reaching these difficult decisions it has a whole solar system of expert subcommittees dealing with particular academic fields. Like the Committee itself, subcommittees are composed largely of academics. The subcommittee chairmen are members of the UGC. The UGC makes its decisions based on the expert advice of these subcommittees, and then, on a great and famous day once every five years, it sends a bulky submission to the government asking for a total sum for all the universities for each of the next five years. It does not ask for money for each university separately; it asks for a total aggregated sum for them all.

Then the fun really begins. Officials of the UGC sit down with officials of the Department of Education and Science and go through the whole submission page by page and line by line. The primary purpose of this very exhaustive (and sometimes exhausting) exercise is not for the department to make cuts in the Committee's proposals, although that does sometimes happen on the way. The real purpose of these hard-working sessions is that the department's officials should thoroughly understand not only the figures which the Committee has put to them but also all the arguments on which those figures are based. Why, the Committee may be asked, do you want so much money for social science courses when there are already signs of unemployment among social science graduates? Why are you not providing more places for mathematicians? Why do you

expect, as your estimates seem to show, that the student population at the universities will increase by this percentage over these five years? Why, in a period of financial stringency, cannot the proportion of teachers to students, the so-called staff/student ratio, be reduced? And so on—questions of detail or of principle, of manpower deployment, or of sheet statistics—all of them have to be argued out. Some are matters of predictable trend, some of informed judgment, some of near guesswork. But the primary purpose of all this discussion is that the officials of the department should be completely informed—and, we would hope, completely convinced—about the submission which the UGC is putting forward. Then the officials of the department can go with a clear conscience to the Treasury for the necessary money.

There is, of course, a period of further argument at that stage, but I will not bore you with the details. At the end of it comes the third glorious day, when a statement is made in Parliament giving the figures for recurrent expenditure over each of the forthcoming five years approved by the government and submitted to Parliament for sanction. The figure, naturally, is bigger for each year as the five-year period proceeds—normal annual increments in staff salaries would require that, apart altogether from new developments. After a little debate Parliament sanctions these figures. And then, wiping off its brow the sweat caused by these arguments with the government, the UGC turns to its task of dividing among the various universities the total amount it has succeeded in persuading the government to provide.

Distribution of the funds is, of course, extremely difficult. The overriding fact is that the total amount voted by Parliament is probably a good deal less than the aggregate of all the amounts originally asked for by the universities individually. If this were not so there would be no problem. But the distribution has to be done, and always with the knowledge that people are going to be disappointed.

Here again it is one of the Committee's great strengths that it has a majority of academics, as do the subcommittees which again advise the UGC. One of the UGC's continuous activities is visiting the universities. Both its subcommittees and the Committee itself spend a great deal of time talking with the administration, the professors, the nonprofessional staff, the health service staff, the technicians and, last but by no means least, the students. These visits are not inspections. Nor are they operational occasions when administrative decisions are made. Instead they are opportunities for the Committee to get the feel of each place, and to form qualitative judgments about the people who work in it. This is the background against which the quinquennial distribution is made, and, as I

have said, it is a difficult job. Nobody would pretend that every university is satisfied with what it gets. There never is enough money to go round, and I suspect there never will be. But the job is done by a body which knows what it is talking about, knows the university world and knows what will be the effect, in each university, of what the Committee decides.

Block Grant

So each university receives a letter from the UGC telling it its financial fate for each of the next five years. Normally the letter gives some indication of the student numbers, undergraduate and graduate, which the money is expected to provide for. But the crucially important point about the letter is this. You remember that each university was required to give information in the greatest detail about its intended expenditure under each of several relevant headings. When the letter goes from the UGC to the individual universities there is no financial detail and no headings, there is simply a straight total sum for each of the next five years. The original submission from the university was detailed, the allocation to the university is a block grant, with no detail at all. This is an essential and cardinal element in the whole system. It means that inside the total sum the university is free to deploy the money as it chooses. In its own internal annual budget it can decide for itself how much to spend on the library, how many teaching and technical staff to employ, how much to allocate to maintenance of buildings, and so on. This freedom, within the budgetary total, is as nearly complete as any freedom in this world can be, and it is genuinely appreciated by the universities. In a word, the UGC does not run the universities. It tries to provide them with the resources to run themselves.

This block grant principle, as it is called, is vital. Of course a university will have other income which is specifically intended for specific purposes—chiefly research grants from the research councils or from industry—which are made to particular departments or individuals. These are in effect earmarked supplements. The basic recurrent annual grant from the UGC is a block grant for the university to use at its own responsible discretion.

Capital Grants

The procedures for capital grants are quite different. They are not based on a quinquennial system, they are earmarked for a particular building or purchase of land, and they are strictly priced on published standards of cost. But here too the initiative lies with the universities. Each of them tells the UGC the capital expenditure it would like to undertake

over the next few years, the UGC argues with the government; the government announces for two or three years ahead how much money it is prepared to ask Parliament to provide, and the UGC has the job of dividing this money among the projects put forward by the individual universities according to its own judgment of their respective needs. Again it is obvious that not everybody will be satisfied—if anybody is—but the decisions have been taken by what is essentially an academic body, the colleagues of those in the universities who are going to be disappointed.

I have concentrated, perhaps too much, on the financial rather than the academic functions of the UGC. But I repeat that the initiatives, all the way through, rest with the universities. They know, individually, what they want to do, and they ask the UGC for the resources to enable them to carry out their ambitions.

Planning and Coordination

I said at the beginning that the UGC was a buffer between the government and the university world, standing between them so that there is no direct confrontation of government on the one hand and universities on the other. We believe that this is essential to academic freedom simply because we do not want to see direct influence by the government, any government, on individual universities. Of course, in the end, any government must decide how much money it is going to provide for the universities as a whole in competition with housing, hospitals, roads, defense and all the other claimants on the taxpayer's money. This is a decision on priorities, and such decisions are the proper function of governments. But it is not their proper function to decide how University A shall develop or what studies University B shall encourage or discourage. Hence the original function of the UGC as a buffer.

But a buffer is a pretty passive object, and over the years the UGC has come to behave rather more actively than a well-behaved buffer should. It is now distributing more than £200 million a year, and that is not chicken feed. There are now 44 universities on its grant list, a small number by U.S. standards, but quite a considerable constituency. With the growth in numbers and in expenditure, something like a central strategy is necessary. It no longer makes sense, if it ever did, that every university should try to do everything. There simply are not enough top-class academics available to staff medical schools or schools of nuclear physics or departments of agriculture, or schools of Oriental languages in each one of 44 separate institutions, so it must be recognized that different universities will be centers of excellence in different fields. This demands at least the outline of a strategic plan, and it has fallen to the UGC to provide it. This is a

heavy responsibility; but, again, the decisions are taken by academics for academics. And as the UGC finds itself encouraging this or discouraging that, at least most academics prefer the judgment of their peers and colleagues to instructions from a government department.

I am not, of course, suggesting that the system is perfect. There are practical difficulties which it does not wholly meet. For example, when there is serious inflation during a quinquennium, the annual block grants dwindle in real value as time goes on, there is no automatic adjustment, and although there are various alleviations and palliatives this is a real problem. Then there is, admittedly, a lack of complete coordination between the capital building program and the annual recurrent grant. It can be argued with some force that the development of any university is conditioned by the buildings it can have, and that the operational budget is, in principle, deductible from this. I am not sure that I entirely accept this proposition, but I do accept that there is something to it.

Again, more generally, there is the difficulty of keeping in properly close touch with each separate university and with the Committee of Vice-Chancellors and Principals. The chairman has continuous correspondence and conversation with the vice-chancellors individually, normally on first-name terms, and the officers of the UGC are in almost daily touch with their opposite numbers in the universities. As for the Vice-Chancellors' Committee, the chairman of it and the chairman of the UGC meet for a working dinner at least once a month, and it is normal that a policy statement to be issued by either is shown to the other in draft beforehand for information and comment. But it is true that as the UGC becomes less like a buffer and more like a strategic planning unit and as the Committee of Vice-Chancellors and Principals itself becomes less like a luncheon club and more like the official collective voice of the university, collaboration between the two bodies becomes increasingly important to the success of the system.

More fundamentally, can the UGC guarantee that it is not subjected to political or governmental pressure? I have tried to give reasons why I think it is not, but I cannot prove it in a court of law.

Perhaps this gets us down to the basic facts of life. The whole operation of the University Grants Committee depends on reciprocal confidence between the three partners involved, the universities, the government and the UGC itself. If either the universities or the government ceased to trust the UGC, the whole gossamer web of this "typically British" institution would collapse.

In my days at the UGC we used to say, among ourselves, that we operated on the Principle of Equal and Opposite Unpopularity. If we were,

by any chance, popular with the government, the universities would think that we were in the pocket of the government if we were, by any chance, popular with the universities, the government would think that we were in the pocket of the universities. In real life there was no danger of either of these positions—we were equally and oppositely unpopular with both. And, if I may presume to say so, I think that in all the circumstances this amounts to a vote of confidence from both.



Hans Leussink, former Federal Minister for Education and Science of the Federal Republic of Germany, is now a senior official of the Krupp Foundation. An engineer by profession, with a doctorate from Munich Technical University, he specialized in foundation engineering and dam construction. He also taught soil mechanics and foundation engineering at Karlsruhe Technical University and was in charge of the Institute for Soil and Rock Mechanics there until 1969 and was chancellor of the university from 1958 to 1961. Dr. Leussink served as president of the Conference of West German University Chancellors from 1960 to 1962. He is author of numerous works on science and education policy.

THE FEDERAL REPUBLIC OF GERMANY

HANS LEUSSINK

As the name indicates, the Federal Republic of Germany is in fact a federal state. So we have two kinds of "state" the federal state and the constitutive states, political bodies more or less independent which together make up the federal system. The federal state as well as the individual states naturally have their own governments, one should therefore distinguish between the federal government and the state governments. In what areas the federal authorities should be responsible has been laid down by the federal constitution. It has a clause by which it is made clear that all responsibility rests with the states, if there is no other regulation provided for by the federal constitution itself. When you take into account that there exist 11 states in the Federal Republic of Germany, besides the federal government, you might imagine the difficulties involved in forming national science policy in Germany.

In May 1969 a major change in the federal constitution was agreed upon. Before that time the responsibility for the universities—which, as the bulk of institutions for higher learning and science, shall here stand for the rest of similar organizations in the field—rested exclusively with the states. This responsibility included the appointment of professors and other senior staff members in their capacity as civil servants, as well as the total maintenance of the universities, e.g. the financing of recurrent and nonrecurrent expenditures for the staff, building equipment and all other facilities. Now the federal government has the legal power to frame general regulations for the state universities. It is also obligated to pay half of the expenditure for new buildings and the first equipment for these buildings, to participate in the financing of major research programs and has some other rights which will not be dealt with here. The increase of power for the federal authorities

will lead to the first direct influence of the federal government in university affairs.

The universities, on the other hand, are protected by the same constitution. It proclaims "Art and science, research and teaching shall be free." In accordance with this constitutional guarantee our universities enjoy a rather independent legal status despite the fact that they are state universities and practically totally subsidized by money coming from the taxpayer. The limitations set to the functions of the governments with regard to the internal affairs of the universities imply an acknowledgment of and regard for the sphere of academic self-administration. The influence of the governments in this sphere remains restricted to its supervisory role, founded in the respective university laws or university statutes.

The sphere of academic self-administration includes primarily matters of research, issues involving academic teaching, especially the organization of studies with due regard to examination regulations, recommendations for appointments to the teaching staff; the awarding of academic degrees and honors, the formal admission and discharge of students; and the maintenance of order within the university, including disciplinary actions.

So, the relationship between the universities and the governments is marked by a pattern of interaction and interdependence between the governments and the academic self-administration, that is, the administration exercised by the universities themselves. The right division of powers between the government, which provides on the whole all the money for the maintenance of the university, and the university with its independent self-administration emanating from the constitutionally guaranteed academic freedom, poses the problem with which universities and governments have to cope every day.

Regarding the intricate system of responsibilities of the federal and the state governments on one side and the rights of the universities on the other, one might easily come to the conclusion that the mere division of powers will inhibit any real influence, exerted by the universities as such, on the shaping of national policies. And one has to admit indeed that the German universities do not play the role in the process of forming national policies which should be attributed to them by the fact that they have such a tremendous amount of knowledge and know-how at their disposal. The governments, on the other hand, are not able to cope directly with internal university problems.

The State Level

Despite the fact that the major responsibility for the universities

still rests with the state governments, there is little evidence of voluntary close cooperation between the governments and the universities on the state level. Of course, due to the historically overcome and now often legally framed set-up of interactions between the governments and the universities, there always has to be some kind of cooperation, but this is mostly on the administrative side. Although it is not always easy to differentiate between administrative and political aspects of a specific question, it should be fair to say that there was, until recently, hardly any participation of the universities at all in the process of shaping a common policy towards the universities on the state level. One might also say that the state governments themselves did not develop and follow clear-cut policies in this field. Only lately have governments of the major states created advisory councils, mostly through nomination by the minister of education, in which not the universities as such, but individual professors and university administrators are asked to give their opinion and advice to the minister and his administration on specific university matters.

Some cooperation of various degrees exists among the universities of a particular state. The rectors of the universities of the area come together and discuss common problems. They sometimes even form a common policy. Mostly this will be directed to fend off attacks on the universities, but sometimes they also make suggestions for university reform addressed to the government. Recently it has been suggested that university councils be institutionalized by law and provide a broad participation of all groups concerned with university matters, including students to a large percentage. On the other hand cooperation among universities rarely crosses the borderline between one state and another.

Thus one might say that there exists—besides the effects of student unrest—very little influence of the universities on government decisions at the state level.

The Federal Level

In contrast to that situation one finds a relatively broad, even formalized flux of influence of the universities on government decisions and vice versa. I am supposed to restrict my remarks to the Science Council (Wissenschaftsrat), but I should like to mention rather briefly two other agencies to give you a relatively clear-cut picture of the educational planning system on the federal level in West Germany.

The Science Council consists of 39 members: 11 delegates from the 11 states (10 ministers of education, 1 minister of finance), 6 undersecretaries of state nominated by the federal government; 16 scientists nominated by the three greatest scientific organizations (the German Research Organi-

zation, the Max-Planck Society and the West German Rectors Conference) and appointed by the President of the Federal Republic, and 6 more personalities from public life, who are nominated jointly by the federal government and the state governments for appointment by the President of the Federal Republic. The term of nongovernmental members of the Council is three years. On the basis of parity in the number of votes, the Science Council is divided into a Scholarly or Scientific Commission (22 members) and an Administrative Commission (17 members, but 22 votes).

Any recommendation given by the Science Council (It does not have executive powers, but only makes recommendations) has to be passed by both commissions in plenary session. At first, members of the Scientific Commission, very often together with representatives from the Administrative Commission and experts from various fields, work in small teams on the particular problems. Then their proposals are thoroughly discussed, first by the Scientific Commission, afterwards by the Administrative Commission, and are finally presented to the plenary session for acceptance or refusal. A two-thirds majority vote is required on any subject.

The Science Council was set up in 1957 by an agreement between the federal government and the governments of the 11 states. The following responsibilities were assigned to the Science Council: to produce an overall plan for the promotion of the sciences (humanities as well as natural sciences), to work out an annual program of priorities to this end, and to make recommendations for the use of funds allocated in the budgets of the federal government and of the states to support science. So far, the assignment of producing an overall plan for the promotion of science and humanities proved too big to grasp in one attack. The Science Council, therefore, tried to divide the subject into three parts. In 1960 it passed recommendations for the expansion of the universities, in 1964 it made recommendations concerning the scientific libraries, and in 1965 its recommendations dealt with research institutions outside of the universities, academies of science, museums and scientific collections. All these recommendations were directed toward improving the personnel and material situation of the institutions in question.

Recommendations for the reform of studies in the universities (1966) and for the improvement of the administrative structure of our universities (1968) were supposed to serve as first steps for the necessary transformation of the German university of the nineteenth century into one of the last third of the twentieth century. A major step in this direction was taken by the Council's recommendations on the expansion and structure of German universities from May 1970 until 1980. This master plan for the development of our universities in the next decade served as a basis for the

educational program of the federal government now in power. The master plan for the universities will be followed by a master plan for research in the Federal Republic of Germany covering not only research in the universities, but also in all other fields, including research in government institutes as well as in industry.

I will not address myself to the specific contents of all of these recommendations but to one suggestion made in 1967 for the expansion of research in and outside the universities, the so-called "special research area program" (*Programm der Sonderforschungsbereiche*).

The main goals of this scheme to foster research are on the one hand the creation of research units with the chance of greater scientific success (through institutionalized close cooperation among scholars from universities and other research institutions in the same scientific field), and on the other hand the concentration of the material and human resources to this end. The German Research Association has been asked to advise the Science Council on the selection of the special research areas and to manage the operation of the program.

While the "standard program" and the "priority program" of the German Research Association deal with the individual scholar and his specific single research project, the special research area program deals with groups of scholars working in broader research areas which already are or will be formally organized to achieve closer cooperation in their scientific area. By this it is believed that the combined and institutionalized scientific efforts, together with the additional money for the various research areas, will result in greater scientific success.

The special research area program is based on close cooperation between the universities which have, as self-administered bodies, to apply for a nomination in the official list of the program which will finally lead to special funding. The German Research Association, with its majority of scientists in the decision-making bodies elected by the universities, has to examine the scientific merits of the applications. And the Science Council with its equal votes in the Scholarly and the Administrative Commissions has to decide whether a specific program should be put on the list for federal and state support or not. Thus the federal government, the state governments, and the universities have to cooperate in formulating this nationwide research program.

Although the Science Council can only make recommendations, the mere fact that ten state ministers of education, one state minister of finance and six undersecretaries from the federal government participate in the preparation and framing of the Council's recommendations ensures that the Council's recommendations will be followed—at least to some extent. This

zation, the Max-Planck Society and the West German Rectors Conference) and appointed by the President of the Federal Republic; and 6 more personalities from public life, who are nominated jointly by the federal government and the state governments for appointment by the President of the Federal Republic. The term of nongovernmental members of the Council is three years. On the basis of parity in the number of votes, the Science Council is divided into a Scholarly or Scientific Commission (22 members) and an Administrative Commission (17 members, but 22 votes).

Any recommendation given by the Science Council (it does not have executive powers, but only makes recommendations) has to be passed by both commissions in plenary session. At first, members of the Scientific Commission, very often together with representatives from the Administrative Commission and experts from various fields, work in small teams on the particular problems. Then their proposals are thoroughly discussed, first by the Scientific Commission, afterwards by the Administrative Commission, and are finally presented to the plenary session for acceptance or refusal. A two-thirds majority vote is required on any subject.

The Science Council was set up in 1957 by an agreement between the federal government and the governments of the 11 states. The following responsibilities were assigned to the Science Council: to produce an overall plan for the promotion of the sciences (humanities as well as natural sciences), to work out an annual program of priorities to this end, and to make recommendations for the use of funds allocated in the budgets of the federal government and of the states to support science. So far, the assignment of producing an overall plan for the promotion of science and humanities proved too big to grasp in one attack. The Science Council, therefore, tried to divide the subject into three parts. In 1960 it passed recommendations for the expansion of the universities, in 1964 it made recommendations concerning the scientific libraries, and in 1965 its recommendations dealt with research institutions outside of the universities, academies of science, museums and scientific collections. All these recommendations were directed toward improving the personnel and material situation of the institutions in question.

Recommendations for the reform of studies in the universities (1966) and for the improvement of the administrative structure of our universities (1968) were supposed to serve as first steps for the necessary transformation of the German university of the nineteenth century into one of the last third of the twentieth century. A major step in this direction was taken by the Council's recommendations on the expansion and structure of German universities from May 1970 until 1980. This master plan for the development of our universities in the next decade served as a basis for the

educational program of the federal government now in power. The master plan for the universities will be followed by a master plan for research in the Federal Republic of Germany covering not only research in the universities, but also in all other fields, including research in government institutes as well as in industry.

I will not address myself to the specific contents of all of these recommendations but to one suggestion made in 1967 for the expansion of research in and outside the universities, the so-called "special research area program" (*Programm der Sonderforschungsbereiche*).

The main goals of this scheme to foster research are on the one hand the creation of research units with the chance of greater scientific success (through institutionalized close cooperation among scholars from universities and other research institutions in the same scientific field), and on the other hand the concentration of the material and human resources to this end. The German Research Association has been asked to advise the Science Council on the selection of the special research areas and to manage the operation of the program.

While the "standard program" and the "priority program" of the German Research Association deal with the individual scholar and his specific single research project, the special research area program deals with groups of scholars working in broader research areas which already are or will be formally organized to achieve closer cooperation in their scientific area. By this it is believed that the combined and institutionalized scientific efforts, together with the additional money for the various research areas, will result in greater scientific success.

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alties. So there exists a slight—under current circumstances it may be normal—tension between the West German Rectors Conference and the Science Council.

Both sides try to overcome this. A formal agreement has been reached about better information from either organization, regular meetings will serve to calm things down, and a broader participation of members of the West German Rectors Conference in subcommittees of the Science Council will take place.

But a major tool to get through to the universities themselves is something the Science Council developed over the years. Small groups of members of the Council visit all universities in the country, ask more or less nasty questions, and discuss the recommendations of the Science Council with university representatives. This exchange of views helps both partners: the Science Council does not lose contact with the actual problems of the universities and the universities get a chance for firsthand information about what the Science Council tries to achieve by its recommendations.

Finally I should like to mention a problem which has been rather unknown to both Germany and the United States in the past, but which is becoming very important right now. There is no instrument to formulate an overall science policy in the Federal Republic of Germany. Hundreds of institutes, some research organizations, like the Max-Planck Society or the German Research Association, have their ideas about what might be a science policy for their own area. The Federal Ministry of Education and Research runs a number of big science programs. But there is nobody in the position to offer appropriate methods for developing something like an overall science policy. Money will always be scarce and the big question mark is, who is going to tell us where to spend it best? What is best? For the individual, for society, for mankind? I should rather like to add another question: Is it really good—whatever this means—to strive for an overall policy in science and research? I am afraid we have to find out many things before we will be able to answer this question. The only thing I am able to say is that the Science Council will try hard during the next two or three years to find some answers. We would be delighted to exchange our views and ideas with yours, to learn from each other, because science and research should not and will not respect national barriers. The development of methods for science policy on the national as well as on the international level is a worthwhile common effort—not least of all to foster good relations in science and research between the United States and the Federal Republic of Germany.



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FRANCE

ALAIN BIENAYME

Since the student uprisings of 1968, and partially because of them, the French university has gone through a period of profound change. These changes have created a need for coordinating the activities of the universities and the policies which the Minister of National Education develops in the name of the government.

The system which existed before 1968 can be easily described. The Minister of National Education, Grand Master of the University and the Rector of each of the 23 academies or Regional Education Authorities presided over the activities of the university.

For each academy, or educational district, there was one and only one university and it was exactly identical to the other universities. Each was composed of five faculties which grouped together the teaching facilities of the same disciplines: law and economics, arts and humanities, physical sciences, medicine and pharmacy. The university as such was not a living organism but a collection of teaching faculties only vaguely related to each other. They were linked directly to the Ministry of National Education by the rector of the academy who was appointed by the government and who was automatically president of the university council.

The options as to the type of education offered in the system were limited. The minister determined the content of courses with the help of several committees composed of professors and specialists. These defined programs and curricula leading to a strictly limited number of degrees at the bachelor's, master's or doctoral level. The degrees had the advantage of all being equal in value in the eyes of the law.

In short, the uniformity of the texts, of the procedures, of the customs, and of the activities of the university was the rule. However, it

must be admitted that behind this official uniformity appeared certain aspects of inequality and originality. For example, it is well known that between the enormous University of Paris—with its 160,000 students and its distinguished professors—and certain small young universities in the provinces, there was considerable difference in the quality of education offered. The problems of the universities themselves were different in intensity, and the lack of power to solve these problems did not always show itself in the same way. Thus, uniformity and centralization of decisions had a tendency to disappear.

May 1968 was a true catalyzer. The law reorganizing university education was passed unanimously on November 12, 1968 by a parliament which finally discovered what a university was and then gave it the legal means to start a transformation. This transformation, which involved the creation of new structures and organisms of decision-making, has now reached the completion of its first stage.

The effect of these changes has been to destroy once and for all the centralized uniformity of the pre-1968 system. What has resulted, of course, is the need for coordination of the activities of the numerous bodies concerned with university education.

Need for Coordination

The number of universities in France increased overnight from 23 to 67. The monolithic University of Paris was divided into 13 autonomous teaching institutions. Now, the basic units of the University are no longer the traditional faculties but rather some 700 Teaching and Research Units. Each of these units groups together about 1,000 students and consequently is of a size which should make good administration easier.

The autonomy of the universities now allows them to determine, by means of their elected councils, their teaching activities and their composition. The number and type of Teaching and Research Units will be the main determinant of this last aspect. These units will vary as to their scientific disciplines, their academic level or their teaching activities.

The newly established decision-making bodies were used for the first time in 1971. Each Teaching and Research Unit elected a council composed of representatives of the teaching staff, the student body, and administrative personnel. These councils in turn sent representatives to the larger university council, which for the first time has a number of members drawn from outside the university community. It is this university council from which come the decisions on teaching policy and methods. It also coordinates the activities of the various Teaching and Research Units and divides the available financial resources among them.

Each of these councils elects its own president. The rector, chancellor of the university, is still appointed by the government, which he represents. Automatically a member of the university council, he is no longer its president. The role of the rector has not, however, diminished notably; he is still responsible for coordinating university education with primary and secondary instruction and for carrying out the financial policies which are given him by the Minister for National Education on the advice of the National Council for Higher Education and Research. This new body, created by the law of 1968, is charged with assisting the ministry in the coordination of university activities.

Before describing the composition and the role of the National Council for Higher Education and Research, one must underline the need for coordination which grew out of the liberation of the universities. At the end of the tumult of 1968 the French government did not go to the lengths suggested by some but only partially adopted the type of system which exists in the United States. It did not want to go so far as to allow total freedom either in the recruitment of students and teachers or in the establishment of operating budgets, fearing that such freedom would give birth to excessive competition between institutions, resulting eventually in marked differences in the value of the degrees granted. The government judged that French customs and attitudes were not ripe to accept such a system.

The system which has developed and which is based on the principles of autonomy and democratic government within the framework of state financing has infused new spirit into the university community. It is now the job of the Ministry of National Education and of its related bodies to assure that the initiatives of the universities are taken in the best interests of all concerned.

Some measures must be adopted to assure harmonious development. First, coordination of the decisions taken by various bodies concerned with university affairs is necessary, so as to give their policies some consistency. Second, the definition of curricula and degrees must be carried out.

National Council

The coordination of policy rests in the hands of a new council created by the law of 1968, the National Council for Higher Education and Research, mentioned above. It is the last stage in a reconstruction process which started at the base with the creation of the Teaching and Research Units.

The activities of this council are indispensable in the life of the new universities since it must advise the Minister of National Education, who is its president, in the following five areas: planning of teaching and research,

establishment of university budgets, definition of national degrees, harmonization between the universities, and judgment in the event of conflict between the rectors and the universities.

The way in which this council will operate is not yet clearly defined. It depends on interrelated problems such as the size of the National Council itself, its composition, and the role which its president, the minister, will wish to play.

The "Orientation" Law of 1968 indicated the percentage of representatives to be taken from each group of electors: full professors, other members of the teaching staff, students, research fellows, administrative personnel, and private individuals. Either a university or a specific discipline is prevented from representation in the National Council unless it has at least 600 participants. On the other hand, to insure the efficiency of the National Council, its size was limited to 90 members. Such a body which has only 32 members of the teaching profession in its ranks cannot represent all the universities, scientific institutions and academic disciplines. If we add the student and administrative members to the teaching members, the total of 54 is still insufficient to represent all the universities. It is for this reason that the minister followed the English and German examples and created a Conference of University Presidents so that every university can make its voice heard at the ministerial level.

The Conference meets real needs. It is normal that the heads of universities should meet periodically to exchange views and to examine questions of mutual interest to their universities. By its official creation the government simply preempted what would naturally have followed. On one hand the Conference can present its projects and desires to the minister, while on the other, the minister can ask its views when he needs them.

Before a further discussion of the respective roles of the National Council for Higher Education and Research and the Conference of University Presidents, it is important to consider two facts.

The first is that the law of 1968 created only the National Council and made no mention whatsoever of the Conference. The National Council is thus legally preminent.

The second is that the law of 1968 makes it clear that the National Council gives advice to the minister. The law thus envisaged the National Council, not as a deliberative body, but as an advisory council contributing to the formation of governmental policies. Under these circumstances the minister would not be any more constrained by the opinions of his consultative committees than he was before 1968.

The question that can now be asked is how, in fact, each of the three partners conceives his role.

One conception is that the two consultative bodies are like parliamentary houses between which the minister may act to resolve conflicts. This opinion finds its justification in the fact that the two elective bodies have different bases of support. Since the principle of representation for each university is abandoned, the National Council will be elected from lists proposed at the national level. It will inevitably be the teachers' unions and the students' unions which will draw up those lists.

In such an eventuality, it could be feared that the deliberations of the National Council would be marred by political or social opinions or interdisciplinary quarrels rather than be influenced by enlightened analysis.

On the other hand, the deliberative and advisory roles could be partially assumed by the Conference of Presidents. But here it could be feared that the presidents of the universities, concerned about the budgets for their own institutions and the scarcity of available resources, might not be prepared to map out the guidelines of the new universities which the nation needs.

This bicameral view of the university system does not, however, correspond to reality. Though conflicts of doctrine between the two organs are not impossible, they will not occur frequently. The two bodies will not be called upon to discuss the same topics, and in the event of the matters under consideration being similar, they will be invited to present complementary opinions and viewpoints.

The National Council and especially its permanent section will be expected to meet frequently in order to carry out the almost daily task of looking at university problems on the national level. It will concern itself with defining the general criteria for the allocation of the university budget with the creation of new branches of study and with the validation of degrees. The Conference of University Presidents will be concerned for its part with problems of administration felt at the university level, such as internal organization, campus police, and budgetary administration. It is closer to the truth to say that the presidents of the 67 universities will inform the minister in a realistic way more on the execution of decisions than on doctrinal conceptions likely to orient higher education.

The role of the Minister for National Education will not be diminished by the institutional changes brought about in 1968. He will not so much decide exclusively on points dividing the two representative bodies as be the true center of final decision. It will be his job to allocate the budget. Today the minister deals with 67 universities rather than with the great names of the five faculties of the University of Paris, who in the past spoke for their whole field.

The minister thus becomes sort of a catalyst for coordination be-

tween the universities. More than ever before, he will have to be surrounded by good advisors able to promote higher education while taking into account the views held by all the partners.

Now, these notions must evolve as regards the objectives of higher education, the degrees, and the options available. These necessities will constitute one of the main fields of action of a coordination policy; indeed, it can be assumed that the distribution of public financing will be influenced to some degree by the extent to which the decisions reached by the minister, on the advice of the two bodies, are followed.

Degree Structure

The universities of today are largely a regrouping or fragmentation of the old faculties. So far, they have mainly worried about the establishment of their own working rules. During this initial period, without the advice of private nonacademic citizens, objectives were defined in general terms. The degrees to be offered was a main preoccupation, and the question was solved by recourse to the old system "licence" and "maîtrise" in arts, science and social sciences.

The new law provided several possibilities for change in this area. Thus it distinguishes between degrees of a national level, officially recognized throughout France, and degrees of individual universities, which are less homogeneous in quality and object. One of the first areas of coordination will be in the establishment of a list of national degrees which will have the advantage of universal recognition. The holders of university degrees, on the other hand, will have to fight themselves to establish the value of their degrees in the market place.

Each national degree will be defined by a few general rules and have a curriculum less explicitly defined than in the past. But it can be feared that the Council's deliberations will only serve to constrain the field of study undertaken so as to be assured of receiving national degree recognition.

During a time of general concern for job security, most teachers and students are criticizing the risks involved with the university degrees as regards subsequent employment. Consequently it is very likely that the universities will make every effort to obtain the right to offer national degrees. Such an attitude would only serve to raise the value of the national degree at the expense of the university degree. Let it be said that in a more open and dynamic system, the university degree could have served to sanction specialized studies and would undoubtedly have led to stronger innovations.

The concept of a national degree as offering greater security seems to have put the university degree under a cloud. The national degree unites

the idea of entrance to a controlled profession with the very different concept of assured employment. It is clear that the experiment of university degree should be carried out at first in a limited number of institutions. If the national degrees appear too constraining and if the university degrees appear too risky, we can have legitimate fear for the progress of higher education.

Thus, the concept of the national degree must change. The minister has recently shown his concern and has proposed a distinction within the national degree itself between two types of degrees. The first would be a professional degree required for entrance into certain professions like medicine, pharmacy and architecture where the state has to guarantee certain precise qualifications. These degrees would be strictly controlled. The second type of degree would be universally recognized, but the curriculum would be less rigorously centralized. The state would only guarantee the level of studies, whereas their content could be left to the individual universities. An example would be in management science degrees.

The degrees are the end result of different educational streams. The streams themselves are going to require a certain amount of coordination. It can be hoped that the National Council and the universities will start realizing the importance of this fact. The universities must establish new streams or options, the job of the National Council and minister will be to circulate information on available curricula and to aid in their selection.

The University and Society

In France the great debate on the relationship between society and the university is still in progress. In coordinating their activities, the universities do not avoid the necessity of defining their doctrines in this regard. The range of possible views on the subject is wide: one can discern at one extreme those who wish for a professional university whose sole object would be to turn out a "product" trained according to the demands of employers, at the other, those who wish for a critical university preoccupied only with constant revolution. Most likely the institutions will turn one way or the other or at least state a definite position regarding these problems. These attitudes not being by nature harmonious, the task of the coordinators will be to accept diversity in the experiments undertaken while bringing information as regards the ultimate aims of the university.

So the National Council for Higher Education and Research and the minister will have to find a just equilibrium between respect for the personality of each university and an enlightened conception of progress in the training of individuals. This task is now being carried out by groups of university teachers and representatives of various professions—industry,

agriculture, commerce, finance, law, and education. These groups have been asked to list the types of higher education needed in each of their branches and to determine their manpower needs in 5 to 15 years' time. They have also been asked to provide a criticism of the present education offered for their profession and to suggest changes which could make it more useful to the student body and to society.

Such work had hardly been undertaken on such a scale until now. It will undoubtedly be a great awakening for the world of the university and will have considerable influence on the determination of new streams of education and options as well as on new teaching methods and degrees. This information will also help improve advanced training and indicate the best ways to keep a balance between early higher education and further periods of training.

Among the major problems which demand coordination is the specialization of certain universities in certain regions; the scarcity of financial and human resources and the necessity of creating efficient and optimal teaching and research teams involves certain choices. In our opinion, university coordination will be good only insofar as students and teachers can move more easily from one region to another. Not all subjects can be taught at a higher level in all 23 academies and in all 67 universities. Certain choices will have to be made to prevent the waste of money and human talent.

In conclusion, higher education in France is much more lively with greater university autonomy and the reduction of the university to a more human size.

To capture their vitality and to achieve real progress, the Minister of National Education will have recourse to the opinion of the National Council, elected by the universities for this purpose, and the Conference of Presidents. The quality of their recommendations will be decisive even if the minister maintains his freedom of judgment and decision. The value of their advice will depend partially on the topics chosen by these bodies for consideration.

Two pitfalls will make the tasks of the councils difficult. First, it would be unfortunate if the eternal quarrel over budgets were to transform the discussions into bargaining sessions. Second, the diversity in the origins of the members of the councils threatens to introduce political considerations into their recommendations.

Coordination of the universities is inevitably a political theme. The French universities must opt for enlightened policies guided by concern for the interests of future generations. Thus can the university become a center for thought on the future of the individuals it has to train.



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THE CARIBBEAN

SIR PHILIP SHERLOCK

Systems of education anywhere and everywhere have to do with people and with persons, with society and with the individual, with a nation and with each citizen. The two aspects belong together. The system reflects the society's history and its present aspirations and goals. This means that systems of higher education in the Caribbean are best understood when they are placed in the context of Caribbean society. It would be more accurate to say "Caribbean societies" since the term "Caribbean" is a geographic one. It does not describe a society or a country. Rather, it refers to a region that is politically the most fragmented, and culturally and ethnically the most diverse in the Americas. The region is a large one, including the archipelago and the mainland countries that border the Caribbean Sea—Venezuela, Colombia—and all the countries of Central America with the exception of El Salvador.

This statement is concerned with the islands. Their geography and their history explain why as yet there is no such person as a man of the Caribbean, why there is no such thing as a Caribbean society; and why there are in the islands many diverse systems of higher education. Geography and history explain also why there are certain fundamental similarities underlying the dissimilarities, and why efforts at establishing contact between the various systems of higher education are important, indeed are essential.

Cultural Diversity and Similarity

To begin with, the separateness and the separatism. An island is a natural geographic unit, whereas a frontier is arbitrary; but where there are

groups of islands, where an archipelago has a geographic focus from which centripetal forces might operate, it is easier to establish cooperative or regional relationships. The Caribbean archipelago is not a group of islands but a line of islands, and the line is a long one, extending for 2,000 miles from Cuba to Trinidad. If the islands were drawn together to form one country, it would have an area of 87,000 square miles, the same as Guatemala and Honduras, or about one-fourth the size of Venezuela or one-fifth the size of Colombia. To the separatism born of geography were added antagonisms and rivalries engendered by history. We can form a picture of the political fragmentation that resulted from European colonization by taking the two republics of Guatemala and Honduras, splitting them into 51 parts ranging in size from Cuba's 44,000 square miles to Becuba's 7 square miles, then separating the parts into 6 independent nations, others that are members of the Kingdom of the Netherlands, others that are a part of France, a few British and United States colonies, and one Commonwealth in special relationship with the United States. Following on this, we should people the 51 islands in the way that history did, after removing all the indigenous Indians, for they were destroyed. First, then, the Spaniards, and after them every possible type of European adventurer and settler—Dutch and Portuguese, Jews, prisoners of war and bondservants from England, Scotland and Ireland, militant English Puritans, French Huguenots, Dutch Calvinists, French refugees from the French revolution, Spanish Conservatives seeking refuge from the national liberation movements in Spain. Add hundreds of thousands of Africans moving in year after year for four and a half centuries, making the Caribbean, like North Eastern Brazil and the Deep South of the United States, part of the frontier of Africa. Add also East Indians, who were brought in as estate workers by the thousands over a period of 80 years. To all these add some Chinese, Syrians, Lebanese. The cultural and ethnic diversity is drawn in the landscape, with Spanish-style architecture in Havana, Santo Domingo and San Juan, steep gabled Dutch houses along the waterfront of Curacao, English-style country houses in Barbados, French boulevards in Fort de France, American-style buildings in new San Juan. The impression of cultural diversity is deepened on hearing black men in Curacao speaking Dutch, black men in Martinique speaking French, black men in Jamaica speaking English.

Notwithstanding all this, there are fundamental similarities. Most of the islands have the same physical configuration of a central mountain spine and sculptured valleys. They grow the same crops and have the same vegetation. The same historical forces of the slave and sugar plantation, colonial rule and miscegenation moulded the social configuration of each island. They created a Creole culture which is identifiable as Caribbean.

In these circumstances it seems best to use the case-study method, describing two or three systems of higher education in the Caribbean in greater detail than others, to indicate how, in different ways, the nations of the Caribbean are changing their systems of higher education to meet national needs. Although the focus is on systems of higher education, it is understood that these cannot be set apart from primary and postprimary education. The basic concept is not that of systems arranged neatly in layers. This concept may be logical and tidy, but it is also static and dead. The concept is rather one in which the various systems of education flow into each other, functioning like the circulatory system of the body, interdependent, dynamic, alive.

Higher Education in the Commonwealth Caribbean

The first case study is that of the system of higher education in countries once called the British West Indies and now known as the Commonwealth Caribbean. The University of Guyana is also considered, because Guyana, though on the mainland, is by its history a part of the Commonwealth Caribbean. This case study throws light on the way in which political independence changes a nation's philosophy of education, on the process by which an institution for higher learning patterned on the metropolitan model seeks to adapt and change to meet new needs and goals, on the methods by which a number of small countries with limited resources can establish and maintain a university; on organizational arrangements that enable a university to serve a constituency in separate countries spread out across 2,000 miles of sea, on the nation-building and personality-building role of universities in developing countries that are predominantly non-European and have a long colonial tradition and an established but often unstated code of white superiority.

Education became a priority with the beginning of a West Indian national movement in the 1930s. The national movement sparked a drive for economic development, and the drive for economic development sparked a drive for education. The whole process was a search for security, a search carried out against a deadline because the newly enfranchised electorates were reaching out for a better way of life after a long period of apathy. Education became the "now thing" not only in the minds of politicians but also in the minds of parents and students. A recent study of Jamaican adolescents shows that both they and their teachers treasured education more than anything else. "Eighty percent of the sample stated that education was the most important 'thing' to them. . . . They needed education 'in order to get a good job' or 'to amount to somebody in life'. . . ."

The findings of the Jamaica sample are more than substantiated by

a study in depth of the aspirations of "Youth in a Developing Society" The country was Trinidad where Blacks and East Indians make up the majority of the island's population. The study revealed the extremely high goals of students with regard to university education. It says that "The highest aspirations in fact are found among the groups formerly least privileged. The pervasive theme among lower middle class students was 'We wish to be looked upon' " One of the striking "universals" in the study was the expectation of high levels of material consumption, but there was also a forceful theme of social commitment "Our nation" will need new people to fill the jobs "vacated by the English." This sense of commitment was strongest in those from the lower class. The fact is that in all the former West Indian colonies the social class and ethnic divisions of the society were reinforced by the colonial educational system which developed as a structural consequence of the social system. Independence requires the establishment of a system of education, and especially of higher education, which uses mobility as a new social dynamic. In the words of the report, "High motivation to achievement and to the accompanying emoluments of the consumer culture provide an integrating mechanism in the society Furthermore the social commitment of youth can be channelled to the national purpose " This means that opportunity is a crucial factor in the society The Prime Minister of Trinidad and Tobago emphasized this in his statement that "the real problem is to transfer a satellite economy, satellite of a metropolitan country, with a colonial mentality, into the economy of an independent country that doesn't have a lot of room to manoeuvre."

Three principles governed the expansion of the system of education that every child should have the opportunity for primary and some form of secondary education, that a center of higher education should be established, and that the content of education should be changed and made relevant to West Indian circumstances and West Indian needs. It is possible to trace the effects on the University of the West Indies of these radical political and social changes.

The University of the West Indies and the University of Guyana are the only centers of higher education in the Commonwealth Caribbean. The older institution, the University of the West Indies, was founded in 1947 as a cooperative effort by 14 West Indian governments and Britain. It began on the traditional British pattern of a high-quality small residential college, the target number for enrollment at the end of the first five years being 500. It stressed the importance of high academic work and especially of research. By 1960 it became clear that the earlier principles had to be changed. A policy of expansion was adopted. In 1960 a campus was estab-

lished in Trinidad, and another in Barbados in 1963. The insistence on residence was abandoned. Night programs were started for part-time students. Enrollment jumped from 900 in 1960 to 5,000 in 1970. The special relationship with the University of London, by which students worked for London degrees, came to an end, and in 1962 the University was given the power to grant its own degrees. New programs were started, such as those in administration, management studies and social work. The University was learning that in a developing country in the contemporary world it had not only to keep its academic standards high but also to study West Indian needs and to help West Indian society to achieve its goals. It continued to insist on high-quality research, because every country, or group of countries, needs at least one center of excellence where the man of the region can measure himself against international standards. This is especially important in the West Indies where achievement is ego-building, for the bitterest result of slavery was self-contempt, and the bitterest result of colonialism was self-distrust. Also, excellence in academic studies depends heavily on excellence in research, research into the natural products of the region, into medical and agricultural problems, into the factors of social change and of economic development, into the effect of the importation of technology from highly developed industrialized countries with high rates of employment into countries with large rural populations and high rates of unemployment. The research not only established excellence but also enabled the university to make its own unique and essential contribution to national progress. The West Indian experience bears out the statement of Raul Deves, a Chilean engineer and educator, that "underdevelopment exists in the mind of man, and while this mind is not changed, educated and transformed, other efforts will be in vain." Also, it reinforces the point made by a former rector of Brasilia, that the fundamental need is training university leaders of the highest capacity and that this can be met only if academic bodies adopt a really mature attitude in regard to the two basic loyalties which every university must respect—responsibility toward the international patterns of learning, and duty toward the social problems of the nation. Without a system of higher education the West Indian countries could have developed neither their own philosophy of education nor of development, nor their own expertise in dealing with the problems of their countries.

Some interesting results have come from this combination of academic excellence with innovation in response to national needs and goals. The organization and structure of the university has been affected. Students have to satisfy certain academic requirements. If they fail to do this after two attempts they withdraw or, in some instances, change their courses

of study. The majority of members of the faculty are on a full-time basis and are required to do both teaching and research. The various academic disciplines are grouped together in the traditional way—the natural sciences, the social sciences and the arts, medicine, education and the rest—and these “faculties” are so organized that their work is considered by “faculty boards” assisted by consultative committees that include student members. But the powers and responsibilities of these faculties are limited. They have no autonomy of their own, no rigid organizational structure. They report to a Senate which considers the academic growth of the University as a whole and plans for it. The Senate, which deals primarily with academic subjects, is strongly represented on the supreme governing body of the University, the University Council. This has as members representatives from each of the 14 contributing governments, from the Senate, the Guild of Graduates (the alumni) and the student body. The money to meet recurrent costs and capital expenditure is provided by the various governments on an agreed formula. The pattern of financial support is much the same as that of the United Kingdom where a University Grants Committee examines the request and makes the grant. One important difference is that in the United Kingdom one University Grants Committee deals with the requests of all United Kingdom universities, whereas in the West Indies it is the other way around—the University Grants Committee made up of representatives from 14 different governments deals with the budget of one university. The Grants Committee does this with the help of a small Technical Committee made up of top-ranking civil servants. These say whether the estimates of the University, which are for a three-year period, have been prepared with the necessary forethought and in accordance with agreed policy. They report to the University Grants Committee which considers the requests for funds to meet inescapable current commitments and new developments. The Committee decides how much money the University should receive for a three-year period, each member being empowered to commit his government for the amount due from it.

The West Indian experience of its system of higher education shows the difficulty confronting poor countries when they set themselves to develop satisfactory systems of higher education of good quality and also at the same level of expenditure as rich countries. The traditional pattern in Britain includes expensive honours schools. Since many students entering a university are not research types and do not need to be carried to the frontiers of knowledge, one suggestion is that what they need is a broad education, and for this the United States model of a liberal arts degree may be the more appropriate and the less expensive. Provision can be made for the transfer of the exceptionally gifted student to the major uni-

versity. It is also becoming clear that the countries of the West Indies cannot afford a large number of highly trained and highly paid specialists in the professions, but that they have to try to provide trained people at three levels: specialists, professionals and sub-professionals. Sir Arthur Lewis, in an article on education and economic development, points out that universities in poor countries have two courses open to them: that of lowering the standards of professional training, which means concentrating on the second level, on the grounds that it is better to have say 100 three-quarter-trained doctors who can be spread over the countryside, rather than 70 well-trained doctors, leaving 30 percent of the population without a doctor. He says, "The alternative policy is to mass produce not the second layer but the third and in the process even to upgrade the training of the third level. One then floods the countryside not with low grade dentists but with high grade dental assistants. If this policy is adopted the corollary is to upgrade the training not only of the third layer but also for the second layer. For the second layer professional now has many more third layer people working under him. . . . From this it follows that he needs an even sounder training than his professional colleague in Europe. . . ."

There is an interesting relationship between the systems of higher education in Guyana and the other English-speaking countries of the Caribbean. Guyana joined with the other West Indian governments in setting up the University of the West Indies in 1947, but in the 1960s she decided to set up her own university. After doing this she made an agreement with the University of the West Indies by which a specified number of Guyanese are admitted each year to the professional schools of the University of the West Indies.

The arrangement by which the two systems of higher education buttress each other in the training of professional people points to one of the ways in which Caribbean countries might find a solution to the almost intractable problem of rising costs. Developed countries, confronted with the same problem, are finding a solution in the grouping of universities, but what are small countries to do? Or developing countries whose future depends on the utilization of their resources, but who have to spend more than they have on education in order to do this? Certainly the developing countries need to study the solutions being tried by richer countries, but it may well be that they should give as much attention to experiments and solutions being tried by countries in the same position as themselves.

In this connection three programs of work in the University of the West Indies may be of interest. One is for teachers in the field, both primary and post-primary. A Department of Education in the University undertakes the professional training of the teacher, but the outward reach-

ing arm of the university for the in-service training of teachers in the field is a specially created Institute of Education. The members of the staff of this institute are dispersed at centers in the Caribbean, and in many respects they do the work of extension officers in teacher training. Similarly, the adult education program of the university is in the hands of full-time university staff employed on the same terms as all other faculty, based on university centers, one in each supporting country. The third outward-reaching arm is an Institute of Social and Economic Research. Its primary functions are to do research and to serve as advisors or consultants to supporting governments. One of the difficulties that the university faced in its early years was that there was no corpus of knowledge in economics or sociology or administration that was relevant to the Caribbean. Through its research the Institute of Social and Economic Research has done much to correct this.

Higher Education in Surinam and the Netherlands Antilles

Before turning to the systems of higher education in Puerto Rico and in the Dominican Republic, reference should be made to the position of higher education in the Netherlands Antilles and Surinam and in the Caribbean Departments of France. Each of these two groups, like Puerto Rico and the West Indies, has been concerned with securing economic viability and autonomy. Can a small country with limited resources have both? Why should independence or autonomy be for the large and rich and for the large and poor but not for the small and poor? What per capita income should a country have before it establishes its own system of higher education? Or what proportion of its children should be in secondary schools? How many trained people can it absorb? The Dutch countries attempted to find economic viability and yet attain autonomy when, in 1954, they set up a Kingdom of the Netherlands consisting of three states: Surinam, the six small islands grouped together as the Netherlands Antilles, and Holland. Each state has its own constitution, and Surinam and the Antilles have a great measure of autonomy in local affairs. The ties between the Antilles and Holland go back to the 1630s, and the educational system is closely modelled on that of Holland. Schooling is thorough, and there is an efficient teacher training college in Curacao, but the total population is only about a quarter million, and there is no university, though there are plans for a law school. Surinam has a small law school which is being expanded, and it is setting up a medical school with a great deal of assistance from the University of Leyden. The fact that there is no joint effort by Surinam and the Antilles indicates how deep rooted is Caribbean separatism, even between countries speaking the same language.

The French colonies of Guiana, Martinique and Guadeloupe chose to follow a very different course. Determined not to remain colonies, and at the same time seeking economic security, they chose to be assimilated into France as Departments. As far as higher education is concerned, the high school student in Martinique and Guadeloupe looks forward to becoming a university student in France, at the University of Paris, the University of Bordeaux and others. At present, the University of Bordeaux has in hand the development of a School of Medicine in Martinique and of a School of Agronomy in Guadeloupe, but certainly for some time to come the system of higher education will be that of France.

Higher Education in Puerto Rico

The second case study for consideration is that of higher education in Puerto Rico, an island which presents the usual Caribbean contrast of a physical family likeness alongside cultural dissimilarities. For example, Puerto Rico and Jamaica share many physical features, but they are very different in population and social development. During the period that Jamaica became a sugar- and slave-plantation island, Puerto Rico, a Spanish military outpost in the Caribbean, was an island of free smallholders, mostly of European origin. After the 1830s when slavery was brought to an end in Jamaica and the large estates fell into ruin, Jamaica became a country of landed peasants, predominantly black, for the number of slaves had been as high as 90 percent of the island's population. At that very time Puerto Rico was becoming a sugar plantation island, and the sugar estates were eating up the smallholdings. Sugar squeezed the Puerto Rican smallholder off his holding and transformed him into a landless estate worker. Slaves were employed also, but the percentage of slaves in the population never rose above 10 percent.

Contrasts and differences notwithstanding, Puerto Rico shared the experience of the English-speaking sugar islands, for after a period of prosperity there came a slump and hard times. Like Jamaica and sister islands, she also had a long period of colonial rule, 400 years of it under Spain, then in 1898 a transfer to the United States. Like Jamaica and Martinique and Curacao she also had to find economic viability and at the same time autonomy. Luis Munoz Marin and his Popular Party, campaigning under the emblem of the peasant's hat, the "pavo," swept to power in the 1940s and provided an answer, that of a Commonwealth in free association with the United States. The political and economic transformation that has taken place in the last quarter of a century is well known, but one aspect should be emphasized here—the impressive contribution made by Puerto

Rican intellectuals. In a comprehensive study of Puerto Rico, Gordon Lewis makes a statement that is valid for the systems of higher education in the West Indies as well as in Puerto Rico, that the educational process becomes much more than an intellectual experience or the privilege of elite groups. It is a vehicle of social mobility, "a mechanism whereby new graduating classes learn not only to understand society but also to manipulate it." In the colonial period the intellectual led the nationalist movement. "The second generation of protest" sought a more fundamental reorganization of the social and economic structure of society. The record shows that the Puerto Rican system of higher education provided a number of eminently qualified Puerto Ricans ready to lead their country in the 1940s, at a time of radical social and political change.

The figures indicate that very nearly two out of every 100 Puerto Ricans are in institutions of higher education. This is about twice the level in most Western European countries and very nearly half of that in the United States. To reach a comparable level the University of the West Indies would need to have an enrollment of 60,000, about 12 times the present number. But there is a financial aspect to all this. A recent report concerning higher education facilities in Puerto Rico examined the specifications laid down by the United States Office of Education for university plants and equipment and stated that an estimated \$259,380,000 would be required by Puerto Rico. It went on to say that "only if a massive Federal grant and loan program were instituted in this year . . . would it be possible to achieve the standards laid down by the United States Office of Education." No possibilities of financing on this scale are available to the University of the West Indies or the University of Guyana.

The Puerto Rican experience illustrates the nation-building role of a system of higher education. Because the system was established about 70 years ago, because in 1942 legislation opened the way for university reforms, and because it was a major objective of the University to make an impact on the whole society, the University of Puerto Rico became a nursery for local and administrative leadership. The Puerto Rican system of higher education also promoted social mobility in much the same way as the West Indian system of higher education. We have already noted the effect on the youth of Trinidad. There is a further point to be made: that both the West Indian system of higher education and the larger more complex Puerto Rican system are committed to the overall planning of higher education. In 1964 an Executive Order by the Governor of Puerto Rico created a Commission for the Advancement of Higher Education, and in 1967 this commission arranged for a study of the space needs of institutions of higher education in the island, with a projection of enrollments

and of faculty increase, bearing in mind the needs of various regions of the island, population distribution and the like. The planning was to be done by the University of Puerto Rico but—and this is important—in consortium with other accredited institutions of higher education. The report recommended the sharing of existing and projected facilities in order to facilitate closer cooperation among the various institutions of higher education.

The Dominican Republic, Haiti, and Cuba

Half a jet hour away to the west of San Juan is one of the oldest universities in the Americas, the University of Santo Domingo. It forms an important part of the system of higher education of the Dominican Republic. There are two private universities, the University of Madre y Maestra at Santiago and the University of Pedro Henriquez Urena in Santo Domingo. Whereas in Puerto Rico there are no basic differences between the private and public universities, there are marked differences between the private universities in the Dominican Republic and the University of Santo Domingo, which was founded in the Spanish tradition and which was made autonomous in 1962. It includes faculties of law, medicine, economics, engineering, philosophy and a school of agriculture and animal husbandry. The student body is politically active. The two private universities are more closely related in their organization structure to the Puerto Rican universities and to a number of the new universities in Latin America. Consequently, though there are possibilities for inter-institutional cooperation, it is more difficult to achieve this in the Dominican Republic than it is in Puerto Rico or the Commonwealth Caribbean. The two private universities were founded in the early 1960s and they are developing impressive new campuses with modern facilities.

Haiti shares the island of Hispaniola with the Dominican Republic, having a third of the land area and about 750,000 more people. The population density is 400 persons to the square mile. Many of the square miles are eroded, and many of the persons illiterate, possibly 85 out of every 100. Eighty-seven out of 100 live in rural areas, a higher proportion than in any country in Latin America. The per capita income is of the order of \$70 (U.S.). The figures indicate the desperate shortage of education in the country. When Haiti became independent in 1803 there were no schools. It was then the colony of St. Domingue, the boast of France as a sugar-producing colony; and as in Jamaica at that time the only training for the mass of the population was through the "pickney gang," the gang of children who, under the direction of an elderly black slave, were driven to weeding and gathering fodder for livestock. A century

and a half later the country had some 3,500 schools, public and private. In Port au Prince there are excellent bookshops with the latest French writing. There is an appreciation of scholarship and a literary tradition. Haitian intellectuals like Price Mars were among the first in the Caribbean to turn the eyes of the black man toward his own rich heritage, his folklore, his authentic belongings. But such education as existed was modelled on that of France. It remained the monopoly of an elite. The curriculum was literary rather than relevant. Leyburn, in his perceptive and sympathetic work, *The Haitian People*, said that teachers trained in this tradition might teach Racine and Montaigne but not soil conservation and new methods of planting. The contrast with the Second Unit Schools of Puerto Rico and the Vocational Training Centres of Jamaica could not be more striking, more harsh. The fact is that the Haitian peasant world is not the world of the Haitian educated. Its language is Creole, whereas classes are in French, and as Leyburn points out, Creole is as different from French as Dutch from German. Haiti has tried to correct the weakness in education. In the decade of the 1950s the number of pupils in primary schools increased by 15 percent. Yet in 1960, only one-fourth out of the 990,000 children of primary school age in Haiti attended school. As far as higher education is concerned, the two important subjects are law and medicine, the traditional ones which lead to status and security.

Haiti lies next door to Cuba, the largest island in the archipelago, as large as all the other islands put together. Jamaica is only 90 miles to the south. Yet the distance cannot be measured in geographic terms. The attitude in many of the islands was that Castro's revolution had removed Cuba from the Caribbean. In recent years, however, educators and others have begun to see that the island still forms part of the archipelago and that events in Cuba are a part of Caribbean history.

It appears as if, during the first phase of the Cuban revolution, the government's chief concern was to redistribute income. It was during this period, in 1959 and 1962 that agrarian reforms were carried through expropriating holdings of large landowners, nationalizing large estates, and redistributing the land to the peasants. During this period the government aimed at moving from an agricultural economy into an industrialized one. In the second phase national effort centered on production. The government, using education as a tool of national development and as a means of integrating Cuba's peasant population into the new Cuban society, set about the task of making the peasant literate, and of improving scientific and technological studies. A new system of education was created for the express purpose of meeting the national goals of an integrated, productive society. In 1961 an attack was launched on illiteracy. The peasant had

been isolated in rural areas by bad roads and by poor schooling. Of every 100 peasants, 43 were illiterate. In country areas 60 out of every 100 children of school age did not attend school. Out of the total number of children that reached the sixth form in primary schools, only 20 percent were from the rural area. The per capita income of the peasant was one-third that of the national per capita income. Through a literacy campaign these deficiencies were dramatized. The campaign swept educated youth into the campaign as a task of social reconstruction. A task force of about 300,000 teachers was created that included 100,000 secondary school students and 30,000 teachers. A UNESCO report emphasized that not only was the effort well organized but that personal contact contributed greatly to its success.

The figures that are available point to an impressive widening of educational opportunity. In 1969 there were 700,000 children in secondary schools, twice as many as ten years earlier. Over the same period the number in intermediary education increased threefold. According to the Cuban Ministry of Education the number of students in institutions of higher education rose to 29,000 in 1969, and the number of professors was 4,300. University enrollment should grow more quickly in the 1970s, because there are now some 80,000 pupils in secondary schools. Before 1959 university education followed the traditional Hispanic pattern with an emphasis on law, medicine, and humanistic studies. A recent article in *Science* by a distinguished Latin American scientist, Marcel Roche, quotes figures supplied by the University of Havana which reveal a sharp change in direction. In 1959 just over 37 percent of the students were in the humanities. In 1968-69 the proportion was 6 percent. The proportion in medicine remained much the same, 28 percent and 30 percent. In education the proportion fell from 19 percent to 8 percent. In science the proportion rose from 7 percent to 16 percent, in technology from 5 percent to 26 percent, in agriculture and veterinary science from 3 percent to 7 percent, and in economics from 6 percent to 6 percent. The statistics take on flesh and blood and come to life in an account Roche gives of a conversation with students at a field school, Escuela de Campo, near Havana. About 80 students gathered around him, "most of them 11 to 12 years old, and I asked a number of them what they wanted to be when they grew up. All whom I questioned knew the answer without hesitation 'mechanical engineer, physicist, chemical engineer,' and in the case of one girl 'military communications.' When I asked specifically how many would take up a career in the humanities, law, history or philosophy, no hands were raised. Although career choice is free it is clear that the policy of the government and the general orientation of the schools have profoundly

modified the motivation of students. Incidentally the increase in total university enrollment has been far from spectacular as compared with increases in most Latin American countries."

The growth in university enrollment in science and technology is paralleled by a growth in scientific research in the university and also in specialized university institutions such as CENIC, the National Scientific Research Centre, ICA, the Institute of Animal Science, and the Victoria de Giron Institute which is a center for basic medical science.

There is some basic research and a good deal of applied research. For example, the Institute of Animal Science is working on such problems in animal nutrition as finding a satisfactory food for cattle which contains a high percentage of diluted molasses as well as other products of the sugar cane. This is so because Cuba is expanding its cattle industry, making the fullest use of all possible products from its sugar industry. Through the research institutes and the system of higher education, research is being directed to solving problems in a number of industries. An example is the fishing industry in which national production has trebled since 1959.

The support the Government has given to science and technology and the public image of the scientist and technologist at work on problems of production has strengthened public appreciation, but it remains to be seen to what extent basic research will flourish. The new attitude is described by Roche. He found that the postgraduate students with whom he talked felt they were useful to the community and they knew that the level of support for their work was considerable. He concluded, "Life is austere for the Cubans but, at least for the scientists, it is bracing and stimulating."

Conclusion

We have traversed thus far some 3,000 miles, moving from Surinam and Guyana on the South American mainland through the archipelago, following the route that the indigenous people of the islands, the Arawaks and Caribs, took many centuries before the birth of Christ. We have moved up the arc of islands from Trinidad and Barbados to Hispaniola, once the center of the Spanish American empire, and to Cuba. We have seen that the history of the region is written deep in the systems of higher education, and we have found abundant evidence of a new dynamism generated within the countries of the region by political change and economic pressures. Today 150,000 university students crowd the colleges and institutions of the region, and pressing on their heels there is a vast crowd of pupils in secondary schools. Their fathers were desperately concerned with independence and economic development. Today's generation appears less moved by economic than by social and by broad political

issues' by the need for changing the traditional Caribbean attitudes of dependence and rivalry, by a rejection of external economic domination, by a rejection of any form of racial discrimination. Blackness had become a dominant theme. And like students everywhere today, the Caribbean student organizations are in a hurry. The last words of the study of the aspirations of youth in Trinidad bear on the point that "The development of the society will tell the story of the students' chances and achievements. One thing is certain, having looked upward to the future, they will never be content with a return to the past." This sense of commitment is stronger when the student studies in a local university. Recently Jamaica was used as a case study for the emigration of high-level manpower and national development, and one of the conclusions was that the group of Jamaican university graduates that emigrates is mostly composed of graduates of overseas universities. The finding is that many overseas graduates do not return to Jamaica to reside after graduation, and that though graduates from the University of the West Indies emigrate, the proportion is much lower.

Today the jet liner and telecommunications, atomic energy and satellites have so reduced our world that the continents have shrunk to the size of islands. They have taken away the buffer of distance that once kept men of different races and cultures apart from each other. The problems of the space age spring from speed and proximity; and the educator of the space age is faced with the problem of using technology and at the same time deepening understanding not only of a country and a people but of the world and of all people. There is no escape from this. In the words of Adlai Stevenson, all men are now travellers on a space ship from which there is no escape hatch. In these circumstances the diversity and variety that characterize the Caribbean become advantages. They offer countless opportunities for contact with, and understanding of, people of many diverse groups and cultures. Seeking to use these opportunities, the universities and research centers of the region, including not only the islands but also some universities in Venezuela, Colombia, Mexico, Louisiana, and Florida, have founded an Association of Caribbean Universities and Research Institutes for the purpose of working together in areas critical to Caribbean development, such as health, food, teacher education, population studies, science, and technology. Already they are exploring ways of using technology to spread specialist resources, of sharing library resources, and of working together in research projects. Taken together, the members of the Association constitute a powerful regional resource of scholarship and of experience gained in the Caribbean. This attempt, however modest, represents a rejection of the old separateness and separatism. Whatever happens, we know now that the old ideas will not do.



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CANADA

CLAUDE T. BISSELL

When Canada emerged as a nation in 1867, it resolved to have a strong central government in order to weld the immense northern regions, separated by distance and different cultural traditions, into a cohesive whole. Education was not thought of as being one of these centralizing forces. At that time, as far as the vast majority of the inhabitants were concerned, education was a matter of primary and secondary schools. Education at these levels was thought of as being a local matter, or at best a provincial concern. If local or provincial governments did not look after the educational needs of the community, then one could turn to the religious sects—Catholics in Quebec, Baptists, Methodists, Presbyterians, and Anglicans in the Maritime Provinces and Ontario.

In 1867 there were only a few universities. For such a young country, they were already well established, but to most people they were not visible, and certainly did not constitute part of the national life. University education then easily became a provincial concern. In French Canada the concern was closely associated with the sense of a separate cultural identity, because the universities were closely linked to religion and language.

In Ontario and, increasingly, in the new provinces that were opened up in the west, university education escaped in large part from the direct control of the church and became an instrument of the state. In Ontario this was only partially achieved. The achievement might be thought of as a first attempt to weld university education into a system. The main seat of learning in the province was King's College in Toronto, which was secularized in 1849 and became the University of Toronto. The government

then made an attempt to centralize all higher education within the University of Toronto, making use of a device borrowed from the University of London by which the university became an examining body and colleges had responsibility for instruction. The college, thus, could retain its religious associations and still draw upon the resources of a state-supported university. A number of church-related colleges joined the University of Toronto without losing their special characteristics. But this could be looked upon as a system only in a rudimentary way. It amounted primarily to a unifying concept, rather than to a system. The concept still governs the structure of the University of Toronto and brings together in a harmonious whole the resources of the state and of a number of religious foundations and traditions.

Manitoba, the first Western Province, went through a somewhat similar process of integration. Here the process was more successful, since the drift toward sectarianism was arrested quickly and a single university, the University of Manitoba, was established and maintained. In Saskatchewan, Alberta, and British Columbia the provincial authorities moved quickly to establish a single institution that would be dominant.

Until the early 1960s the provinces, despite their constitutional responsibility for higher education, gave little serious attention to the universities. The government in the Maritime Provinces left the development of higher education largely in the hands of sectarian interests. In Quebec, the Roman Catholic church dominated the scene, with the exception of McGill, which was in many respects the single most powerful manifestation of the English-speaking presence in the province. In Ontario, the University of Toronto enjoyed a somewhat shadowy primacy as a provincial university, and the other institutions relied largely on church and private benefactions. In the west, the universities were the closest approximation to the land-grant institutions in the United States. They were the official wards of the province and thus had a security and status not easily attained by the older foundations in the east.

Expansion and Diversification

When we talk of systems of higher education in Canada, then, we are talking about developments of the last ten years. The principal reasons for these developments in Canada, as elsewhere, are the extraordinary growth in the numbers attending the universities and the vast increase in expenditures on higher education. The reasons for the growth are familiar. Following the Second World War there was an influx of veterans into the universities. They communicated a taste for higher education to their younger brothers and sisters and, later, to their large and flourishing families.

In the early fifties the doctrine of the close association between economic success and higher education was dominant and universally accepted. Canada felt some of the shock waves of Sputnik and determined to build up its engineering and scientific resources. In the sixties new factors were at work. Students were looking for utopias, and the universities, if reshaped, might qualify. To these students, the university was more and more a natural extension of secondary school, it was not so much a preparation for a job as a necessary stage in development.

All these reasons account for the enormous growth. In 1951-52, full-time enrollment in Canadian universities was only 63,000, or 4.2 percent of the 18-to-24 age group. (The total population of Canada was then approximately 14 million.) The major increases did not begin until 1955, from 1955 to 1968 the universities were transformed. By 1968 the numbers enrolled were 270,000, or 11.4 percent of the 18-to-24 age group. (The total population was by then approximately 21 million.) This is still a much lower proportion than in the United States, where in 1968 an estimated 20 percent of the same age group attended university. The national increase in university enrollments in Canada between 1951 and 1960 was 80 percent, between 1961 and 1968 the increase was 129 percent. The total increase between 1951 and 1968 was 300 percent. These numbers bred enormous costs. The total expenditures by university between 1958 and 1968 rose from \$140,000,000 to \$1,150,000,000.

Numbers forced expansion and diversification and in this very process created the outlines of a system. Universities often followed the British pattern and established dependent colleges that quickly reached independence. The need for technologists inspired the development of institutions that were less theoretically inclined than the traditional universities and did not make the same demands for proficiency in mathematics and languages. Ontario set up an entirely different kind of post-secondary institution, the College of Applied Arts and Technology, devoted to training for specific jobs. Institutions of this type, of which there are now 20, are thought of as alternatives, not parallels, to the universities, although provision is made for some transfers to the university. They are, thus, quite different from the American junior colleges, which are alternatives to the early years of university. But the U.S. model has been followed in British Columbia, and the Ontario CAATS will no doubt take on university responsibilities as numbers and costs continue to grow.

In Quebec expansionist forces led to a most profound transformation. The old system was grossly inadequate for the needs of the new age. The old universities were essentially elitist, postgraduate institutions. The *collège classique* took the student at the age of 13 and put him through

an eight-year curriculum culminating in the award of the baccalaureate, which then gave admission to specialized courses at the university. These colleges charged fees, so that automatically a great many French-Canadians were denied the possibility of higher education. Moreover, their curriculum was heavily classical and philosophical and inhibited the growth of scientific studies. Public schools existed, but these were not normally the channel by which one entered university. A Royal Commission was appointed which, in effect, recommended the elimination of the traditional role of the colleges. Now the route to the university lies through the secondary school and through a two-year post-secondary program in a network of public colleges that prepare for admission to university. The effect of these reforms was to bring the system of higher education in Quebec closer to that in the rest of Canada, and effectively to eliminate the old barriers to university. The new system of education was the most potent part of "the quiet revolution" that swept over Quebec in the sixties.

The arrival of greater numbers of students with more diverse interests and from diverse social backgrounds led, then, to attempts to analyze what already existed and to think in terms of diversification and alternatives. New institutions had to be created overnight. This compelled institutions to plan far more carefully than they had ever done before. Changes had usually come so slowly that they could easily be absorbed in the normal process of growth. But the new changes lay beyond the old leisurely methods. Now there was need for anticipation and control. The universities, a little reluctantly, turned to the techniques that they had been teaching in their schools of business and administration and that had already been adopted in many public and private enterprises. They began to examine critically their own internal relationships and then their relationships to other universities and to society and the state.

Background to Coordination

It was not easy to adopt even a simple systems approach, for universities had placed great store on the natural evolution of institutions. But the dominating force for change was the realization that only through a system could the individual institution survive in the new age.

One could not in the early stages talk of a system in the sense of a coordinated and centralized program for the development of higher education. Such systems as existed in the early sixties were largely the result of immediate response to crises. On both the government and the university level they tended to be tentative, ineffective, almost apologetic. There is no natural tradition in Canada making for the development of large, inter-related, centralized systems of higher education. For one thing, there had

been no tradition of direct political involvement in the financing and governance of universities, certainly not to the extent that there has been in the United States. The parliamentary system encourages concentration of power in the cabinet, and it was traditional for matters of higher education to be looked after informally and indirectly either by the Prime Minister or by the Minister of Education. This, of course, had its own dangers. But it did eliminate day-to-day interference in the affairs of the university, since ministerial direction was vague, distant, and largely benevolent. The universities, for their part, were fearful of any organization that would centralize power and thereby expose them to much more direct political action. For example, a special commission was appointed in 1966 to look at graduate education in Ontario universities; when it recommended the setting up of the University of Ontario, there was an instantaneous and highly emotional response on the grounds that this violated the tradition of institutional autonomy and prepared the way for direct political intervention. The inspiration for the recommendation came from California, and subsequent events there tended to justify the suspicions of the Ontario universities.

The tendency in Canada was to follow in the British tradition of the buffer between the academic world and the political world—a commission that would analyze the universities, interpret them, and support them before those who had to make the ultimate political decision. At the same time there was a good deal of skepticism of the effectiveness of the British system, and a fear that such a commission could provide simply a respectable camouflage for government interference. As so often in their history, Canadians set out to learn from both the strengths and weaknesses of British and American practice.

The Ontario System

I propose now to look in some detail at the kind of structure that emerged in the Province of Ontario. I do so because this is the province with which I am most familiar. It is also the largest and wealthiest province (its population in 1970 was approximately seven million), and it has the most elaborate and complex university system. Further it is the province that has tried most persistently and, I think, most successfully to work out a distinctive university system.

The Ontario system has 14 universities of greatly varying size, tradition, and scope. The system is based upon the five oldest universities—three of them, Toronto, Ottawa, and Queen's having deep nineteenth-century roots, and the other two, McMaster and Western Ontario, being largely creations of this century. These were the only five universities in

existence at the beginning of the Second World War. Since then nine additional universities have been established, some of them deriving from existing institutions and drawing on established traditions, others special creations of the times. Of the nine new institutions, perhaps the most impressive is York University which began as a college of the University of Toronto, first acquired a separate collegiate setting, then moved to a spacious area on the outskirts of the city where it now displays all the external splendors and most of the internal complications of the multiversity.

The Ontario system is first of all a voluntary association of these 14 universities, cheerfully described by its proponents as "collective autonomy." The activities of the association can be divided into roughly four categories. The first is a common approach on broad financial matters where the needs are seen in terms of the total system. The second is a voluntary association to provide common use of expensive facilities, particularly computers, libraries and, more recently, educational television. The third is an attempt to bring qualitative and analytical judgments to bear upon new developments in graduate education, where the cost is greatest and the ambitions most intense. The fourth and most difficult is the attempt to plan on a systems basis so as to eliminate unnecessary duplication and to concentrate resources.

For a number of years these complex tasks were attempted in a purely voluntary setting and with the sketchiest of central organizations. The work was done largely by full-time administrative appointees in the various universities, and the chairman of the Committee of Presidents carried a heavy burden. In 1966 a full-time executive director was appointed, and this inevitably brought with it an expansion of the central system organization.

A central government structure emerged beside the central university structure. For a few years in the early sixties it consisted simply of a committee of laymen and civil servants formed to advise the government on the distribution of resources and the general direction of higher education. There followed in rapid succession the setting up of a separate Department of University Affairs with a minister, and in 1967 the appointment of a full-time Chairman of the Advisory Committee. What we now have is a government of parallel powers, one deriving its authority from the existing institutions, the other from government, each acknowledging a need to work with the other. Often, indeed, the two bodies agree to form joint committees whose recommendations are looked upon as binding by both universities and government. In the last resort, of course, it is the government committee that exercises the final power, since it is close to the center of political decision. It is this committee that advises the

government on the total sum of money that should be made available both for operating and capital purposes. The committee, however, tries to avoid any suspicion of favoritism by determining the allocation of funds on a quantitative formula based upon the number of students and their distribution among various disciplines.

The system of parallel powers has many advantages. The main one is the cooperation ensured between the public and the private, between the political and the nonpolitical. At its best it means development and direction without external coercion in accordance with a broad principle of equity.

But there are weaknesses that must be guarded against. The balance between the universities and the government is a perilous one. It can be easily upset if the government committee chooses to exercise its giant's strength without any prior consultation. Then the very insulation of the committee from the political process, outwardly one of its great strengths, can be a weakness. The political process is not necessarily a harmful one, since it is slow-moving and it depends ultimately on the reconciliation of opposed forces. But a committee isolated from this process can easily become a front for bureaucratic power; major decisions can be hidden in procedural edicts and then innocently authorized by the committee without thorough discussion.

The system, like all systems, depends upon the wisdom and expertise of the people at the center. In Ontario prominent laymen work on university boards and tend to see themselves as institutional spokesmen, and it has not been easy to persuade laymen to join the central committee. The government has wisely accepted a rough rule that half of the members of the committee should come from the academic community, and should, as far as possible, carry the approval of that community. But it is inevitable that the chairman, who is a full-time appointee, should exercise great powers and become, in effect, a super-president, blissfully free of the checks, balances, and vetoes that surround any institutional head.

Today a centralized system is under great temptation to move quickly and sweepingly. The unrest in the universities, of which Canada has had its modest share, has bred suspicion and distrust among the public, who are the more willing to hand over the development of higher education to a strong, central power. In a state or province, centralization of universities may have a number of undesirable consequences. Provincial authorities are bound to be provincial in outlook—to be suspicious of urban intellectuals, to set an inordinate value on equality, and to view external influences with conventional alarm. Ontario so far has shown few of these provincial tendencies. It has welcomed and encouraged postgraduate

work and research, and has been hospitable to foreign students and staff. But there are many signs of a reversion to provincial normalcy when advanced work was thought of as pretentious luxury and great emphasis was placed on local needs.

But despite the dangers of the provincial system, the universities can never go back to the old regime of autonomy that was just another name for isolation and neglect. They must accept the fact of provincial dominance and of the necessity for a system. But they can fight for a double system—for a recognition that they are a part of national as well as of regional life. History and precedent will support them.

Role of the Federal Government

Despite the constitutional assignment of education to the provinces, all ten provinces showed little interest in the universities until the late fifties and early sixties. It was the federal government that in 1951 began a systematic program directed toward the rescue of the universities from imminent financial collapse. At this particular time there were a number of national reasons for this federal undertaking. The first and most compelling was the use by the federal government of the universities for the rehabilitation of veterans. The second was the appearance of an important report by a commission, called after its chairman, Vincent Massey, which in its analysis of the weaknesses of literature, the arts, and the sciences gave priority to the universities as sources of national cultural strength. The federal government, as a matter of fact, had plenty of precedents for direct action. As early as 1876 it had in the Royal Military College established its own institution of higher learning. In the Second World War it set up the National Research Council concerned with scientific research in industry and government laboratories, but also increasingly in the universities. Following the Second World War it established the Canada Council, a parallel body in the humanities and social sciences, which devoted approximately half of its resources to the universities both for operation and capital purposes. Moreover, through the years an increasing number of departments in the federal government made grants to universities for specific research purposes. In 1967-68 the number of such departments had reached 39. Then in 1964 the Canadian government entered upon an ambitious student loan plan which still provides a basis for assistance to students at university.

Federal government interest in the universities was paralleled by federal university organizations. Provincial university organization is a latecomer on the scene. The national organization of Canadian universities goes back to 1911, and a strong national office in Ottawa preceded pro-

vincial offices by ten years. It says a good deal for the inherent cohesiveness of Canadian universities that all 60 of them—ranging from small, church-supported liberal arts colleges to big multiversities—could live together harmoniously in one organization.

But the establishment of a strong second system is beset with difficulties. The federal government has no academic machinery of its own and has steadfastly insisted that its role is a purely fiscal one. Moreover, during the last four years it has abandoned even a direct fiscal role. In 1967 it ended its system of direct grants to the universities and entered into an agreement with the provinces to provide 50 percent of the operating costs of post-secondary education. The provinces have total discretion on the spending of the money. The federal government is the estranged parent content to pay a big alimony provided it is relieved of any responsibility for the children.

It must be admitted that this policy of apathetic benevolence has convinced supporters. French-Canadians, whether they incline toward federalism or separatism, passionately resist any federal role in higher education. Moreover, it is not easy to define the role that the federal government should play; suggestions range from the establishment of professorships in fields of special national concern, e.g. military strategy and international relations, to the support of a group of national universities or—and this is the most plausible—the financing of research and post-graduate work.

The argument for the double system—provincial and federal—is not financial, since the university may or may not get more money, and it is not political, since two masters do not ensure institutional autonomy. The argument is educational: a federal interest will mean a more bracing atmosphere, less constricted and introverted, more receptive to international ideas and needs. Moreover, the national interest will be quicker to make qualitative judgments, to support strength, and will be more reluctant to sustain mediocrity. Finally, in a country divided and troubled, the university should be a national influence, helping to give a sense of national direction, to strengthen the ties that bind a country together.

Whatever the nature of the final system, universities in Canada, as elsewhere, must adapt themselves to the concepts that govern a systems approach. Some of the old certainties must be abandoned, including, I think, the right, on an institutional basis, exclusively to select students and determine curricula. Autonomy will rest increasingly on the right to determine who will teach. If this goes—and it is under grievous attack—then the university will disappear into one great undifferentiated system of education, from kindergarten to the Ph.D. But if universities can preserve

their identity within the system, then the system can give them additional strength an assurance that they are doing what they can do best, a consciousness of having dependable allies, and, above all, a knowledge of being close to the center of things.



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GHANA

ALEX A. KWAPONG

In many ways, the development of higher education in Ghana is typical of what has happened in many other African countries. There are, of course, differences due to geography, history, national experience, and circumstances. But it is true, nevertheless, that higher education has followed a pattern of growth and development that is almost uniform throughout the greater part of Africa south of the Sahara. The problems and challenges which these various African countries face are similar, and so are the aims, objectives, and responses which they have adopted in the light of these problems. I shall concentrate on Ghana in this talk, partly because it provides a typical and interesting case history, and mainly because it is the one country in Africa whose system of higher education I, of course, know best.

History of African Higher Education

Perhaps a little history at the outset may be useful as a background against which to set these problems, and this history will also enable us to appreciate more fully the present situation of higher education in Africa in general and in Ghana in particular.

It is not generally known that university institutions have a long and honorable history in Africa and that some of the world's oldest universities are to be found on the African continent, dating back to the ninth century A.D. According to the records, the University of Qarawiyyin in Fes in Morocco was founded in A.D. 859 and Al Azhar in Cairo, Egypt, a century later in A.D. 972. Both of these institutions (like their later counterparts in Medieval Europe), were religious foundations which served as leading centers of Muslim scholarship in the Islamic world during the Middle Ages. Other famous African centers of learning may be mentioned,

like Sankore which flourished during the heyday of the Empires of the Western Sudan—Ghana, Songhai, and Mali.

But modern, western-type universities mainly date from the period after the end of the Second World War, during the late 1940s and early 1950s. The long period of relative intellectual isolation and stagnation in Africa which set in after the breakup of the Sudanic Empires and the coming of the slave trade was not much helped by the subsequent era of so-called "Scramble for Africa" and its colonial partition by the various European powers. Formal educational systems began to take root in these various colonial territories during the last decades of the nineteenth century and the early years of the twentieth century. These systems in their initial phases owed a great deal to the pioneering enterprise of various Christian missionaries and traders and were (and are for the most part still) inevitably patterned after the systems obtaining in the metropolitan countries of the colonial powers. Thus in Ghana, for example, the present educational system was built up largely by various Protestant and Catholic Christian missionaries during the nineteenth century and early twentieth century and very much bears the imprint of these origins, and it was only much later in this century that the British colonial government took over direct responsibility for and control over this system and gave support to the various elementary and secondary schools and the training colleges which had been set up by these missionaries.

Formal modern university and higher educational institutions were, however, very late in coming throughout the various colonial dependencies, and the neglect of higher education by these colonial powers was one of their most important sins of omission. The second decade of the present century saw the foundation of colleges which later grew into universities. These were institutions like Gordon Memorial College and the Khartoum School of Medicine in Khartoum, in the Sudan (founded in 1924), Makerere College in Kampala, Uganda (1922), Achimota College in Accra, Ghana (1927), and Yaba College in Lagos, Nigeria (established in the same period).

The impetus for the establishment of these new universities was undoubtedly provided by the Second World War. This war brought about revolutionary changes in every aspect of life all over colonial Africa, whether one considers the political, economic, social, or the cultural fields, and the consequences of these changes are still being worked out today. With the exception of a few isolated areas like the Portuguese territories of Angola, Mozambique, and Guinea Bissau and the white dominated areas of southern Africa, all the former British, French, Belgian, and Spanish colonies have gained their independence as new African nations and are

now engaged in the arduous tasks of nation building and the reconstruction of all aspects of their national life. Forty-one new African states have come into being during the decade of the 1960s which has been aptly called "the independence decade."

These nations were born in the midst of high hopes and great expectations. Many of these hopes have turned out to be facile, over-optimistic, and remain unfulfilled, and in many respects, the post-independence African scene seems to the sober observer to be characterized by political turmoil and instability and economic and social disillusionment. Yet the picture is not all one of entirely unrelieved gloom, and, in many other spheres, the changes have been positive and creative, and many concrete achievements have been recorded.

African Higher Education and National Development

Perhaps in no sphere of life in the African countries have these changes been so spectacular or so profoundly felt as in the field of general education and especially higher education. And the extent and magnitude of these changes can be seen in the fact that the Association of African Universities, which was formally inaugurated in 1967, now boasts some 42 member university institutions. One may justly say that it is in fact this very rapid expansion and these very successes in the field of higher education that have clearly highlighted and brought into sharper focus the problems which African universities have to face and overcome today, a decade after their foundation.

And what are these problems which they must overcome? To answer this question, one must first look at the functions of universities in general. It is generally agreed that universities everywhere exist to fulfill three prime objectives, teaching, research, and service to their societies, that is to say, to acquire knowledge, to preserve and transmit this knowledge, and to promote the application of this knowledge to the service of society. So much will, I think, be admitted as common ground. But as we have seen, the new African universities came into being at the same time as the birth of the new African states or soon after they attained their independence. Thus these African universities were consciously conceived of and designed as prime instruments for the attainment of national independence or the consolidation of this independence and to help meet the urgent needs of post-independence. Therefore, in addition to serving the universal and basic objectives of universities everywhere, i.e. "the preservation, transmission, and enrichment of learning," these universities were expected, above all, to promote the development and modernization of their various countries, they were meant to help meet the needs of develop-

ment; they were designed to be "development universities" in developing countries and were expected to play much the same role as the land-grant colleges of the United States in the late nineteenth century. Hence, their main problem was and remains how to establish a correct balance or "mix" between the imperatives of the so-called "ivory-tower" of academic freedom and academic excellence on the one hand and, on the other, the demands of national development. The two are, of course, not antithetical.

Manpower economists have, of late, thrown very valuable light on the nature of the problems of development which the developing countries of Africa and elsewhere have to face. These economists have demonstrated clearly that these development problems are principally problems of "human resources," and that human resources are *central* to the process of development. As Professor Harbison of Princeton University, a leading authority on this subject succinctly puts it, "In the final analysis, the wealth and prosperity of nations depend upon the development and effective utilization of human resources. Capital and natural resources are passive factors of production, human beings are the active agents who accumulate capital, exploit natural resources, build social, economic, and political organizations, and carry out national development. Clearly a country which is unable to develop the skills and knowledge of its people and to employ them effectively in the modernization process will be unable to develop anything else."¹

Six principal human resource problems have been identified in Africa. These are, first, the high rate of population growth of between 2.5 and 3 percent each year (This population pressure is as yet not as catastrophic in Africa as it is in Asia, but the incipient demographic problem is clear for all to see, especially as most of this population is young and nonproductive and therefore places a very heavy burden on the resources of the African governments.) The second problem is sharply rising unemployment in the rapidly growing African cities. A third problem, and one closely related to the second, is the underemployment and disguised unemployment of the masses in the rural areas who form the bulk of the total national populations and who are engaged in traditional, low-income subsistence activities. The improvement of the material and social circumstances of these rural masses is perhaps the most crucial task before all African governments. Fourth is the shortage of critical and strategic skills in all sectors of the African economies, and these shortages are not only the skills of high-level manpower, e.g. of engineers, scientists, doctors, accountants, agronomists, and so forth, but even more serious is the lack

¹ Frederick H. Harbison, "A Human Resource Approach to the Development of the African Nations," April 1971. (A paper prepared for the Overseas Liaison Committee), p. 1.

of middle-level or subprofessional manpower, the skilled craftsmen and technicians who are the real backbone of any advanced and developed country. The fifth problem is the inadequacy of the formal educational systems, which are poorly geared to the needs of African national development despite the fact that they are consuming an ever-increasing proportion of the human and financial resources of the African countries. (I shall come back to this later.) And finally, there is the problem of the migration of the better educated Africans to the advanced countries to which they are attracted by the higher pay and better employment opportunities. This is the problem of the so-called "brain drain," which again, is as yet none too serious in Africa. These are the problems of national development with which the African countries have to grapple and which the African universities were consciously designed to help overcome. They are all interrelated and provide very severe challenges for the teaching, research, and service contributions of the African universities.

Higher Education in Ghana

If we now turn to Ghana, we shall find that this country provides an excellent case study of all these problems of African national development. Ghana, the first of the colonial territories in Africa to attain independence in 1957, is in terms of education and the general level of modernization quite well off compared with several other African states. A country of some eight and a half million people, it possesses three universities: the University of Ghana at Legon, the University of Science and Technology at Kumasi, and the University College, soon to become the University of Cape Coast. Together these three universities have a student enrollment of over 5,000. The University of Ghana at Legon, the first to be established in 1948 as the University College of the Gold Coast, was, like the other post-World War II university colleges founded in the British colonial territories, in "special relationship" with the University of London. That is to say, its curriculum, examinations, and appointment of members of its staff were approved by London whose degrees it awarded, although it enjoyed internal academic and administrative autonomy. It became a fully independent university in 1961. It possesses the full complement of academic departments and faculties of arts, social studies, science, agriculture, law, medicine, business and public administration, and various research and post-graduate institutes, of which the Institute of African Studies and the Institute of Statistical, Social and Economic Research may be mentioned. The University of Science and Technology at Kumasi was originally the College of Science and Technology which became a full university in 1961. As its name implies, it concentrates on the technological and applied

sciences, with faculties of engineering, science, architecture, art, pharmacy, and agriculture and trains the much needed skilled manpower in these professions. The University College of Cape Coast, on the other hand, founded in 1962 and in "special relation" with the University of Ghana until the end of this academic year when it becomes a fully independent university, stresses education and the training of graduate teachers for the secondary schools and teacher training colleges. It will be seen, then, that for its size and population Ghana is relatively very well endowed with universities.

Founded just before the independence of Ghana and in the early years afterwards, these universities have undoubtedly made important contributions to the development and modernization of Ghana. The high-level manpower required to replace the departing colonial administrators and man various areas of the modern sector, especially the civil and public service, have been turned out and continue to be turned out by these institutions. The University of Ghana alone, for example, has produced some 4,500 graduates in the past decade and a half, and it is no exaggeration to claim that independent Ghana could not have come into being or have accomplished, despite the many grave political and economic difficulties of the past decade, what it has accomplished in all aspects of its national life without the contribution of these universities. Yet now that the novelty of independence has worn off and the serious problems of growing nationhood have become so manifest, new demands are being made of these universities, and they are being called upon to face larger and more challenging responsibilities. The relevance of their curricula, their teaching, and their research programs to national development needs becomes urgent, the numbers, types, caliber, and quality of their graduates and post-graduate students must be reassessed in relation to national manpower requirements. Their contribution to the cultural and social development and integration of their country needs re-emphasis. These universities must not only do this economically and with the fullest national benefits for national costs, but must, at the same time, continue to grow as fully international and mature centers of learning accepted by their peers in the comity of world universities.

We must now look at these universities within the context of the general educational system of Ghana. These three universities stand at the apex of an educational system that has a fairly broad dynamic base of primary school education that is now nearly universal in its coverage and a rapidly growing middle level, although this secondary and middle sector is still narrow and constricted and constitutes a bottleneck in the system. The whole system has been characterized by phenomenally rapid expansion and growth in numbers, as the following statistics of student numbers during the last decade 1960-70 will illustrate primary and elementary

school enrollments rose from 586,337 to 1,400,430, i.e. by $2\frac{1}{2}$ times during the period, secondary school student numbers trebled from 16,507 to 49,182, but the greatest expansion was in the universities where in 1961, first degree and subdegree students numbered 1,390 and now are over 5,000, i.e. showing an almost 400 percent increase.

The educational system accounts for a very considerable fraction of the national budget. In 1960, this amounted to 13 percent of the national budget, 10 years later, the education budget had risen to 22 percent (one of the highest percentages in the world), and the higher educational sector accounted for 40 percent of this education budget. And this education budget, as a whole, cost the Ghanaian taxpayer N¢95.4 million (about the same in dollars) in 1970 in both recurrent and development expenditure.

At a time of acute economic stringency aggravated especially by Ghana's serious external debts, it is not surprising that the problem of the mounting costs of education in relation to the total resources available for national development has brought into sharp focus the question of maximum returns for this expenditure and the cost-benefit implications of this educational expenditure. Since higher education is, as elsewhere in the world, the most expensive sector, this re-examination of educational costs has tended to concentrate on the cost of financing the universities. (Certainly the cost of the *whole* education system can do with a general reappraisal.) At any rate, with effect from this year, the system of absolutely free university education which has hitherto applied is being modified so that the students, instead of being given full scholarships, are being asked to meet the cost of their board and lodging themselves or by means of a loans scheme which the government is introducing this October (1971). The universities, which are all fully residential, are being asked to review critically and to contain especially their recurrent expenditure. In reviewing these university costs, however, one must take into consideration one important factor which the universities in Ghana (and in other African countries) have to face but which does not concern universities in the developed countries: this is the fact that our university budgets do not only have to cater for *purely* university or *academic* expenditures of departments, faculties, schools, and institutes, but they are meant to provide as well for the amenities "of a town," such as hospitals, primary schools, staff housing, transport for workers, water, electricity, the construction and maintenance of roads, and of an extensive estate and grounds, all of which are essential conditions for a modern university, and are taken for granted in the advanced countries. It is therefore necessary to place this problem of university "municipal" costs within its correct perspective and context.

Related to the question of costs is that of the performance of the

universities in terms of the numbers and quality of their output of graduates, the amount and quality of their research programs, and the relevance of these in meeting the development needs of the country.

These problems are both external and internal to the universities. Let me first take the external ones: the proportion of science and technologically trained graduates, for example, which the universities can produce depends directly on their intake from the secondary schools below them and whether these schools are turning out enough science students of the right caliber or not. The numbers of these science students, in their turn, depend upon whether there is a national science policy which places a higher priority on the production of science teachers and the provision of science facilities for the secondary schools or not. Again, the output of graduates by the universities depends on the existence of a flexible national manpower plan against which the universities can adapt their curricula and distribution of their students and resources. And similarly, their research output and effectiveness will be materially enhanced and influenced by the adoption of a set of nationally determined priorities, in agriculture, health, economic development, and so forth.

The internal problems, varying from institution to institution, concern, of course, the quality and strength of the local and expatriate staff, the effectiveness of the leadership of these universities, the efficiency of their administrative and management techniques, the standards of their academic and professional departments, faculties, schools, and institutes, and the caliber and standards of attainment of their students. Important also are the relationships which these institutions as a whole develop between themselves in the country, between themselves and the government, and between themselves and foreign universities and international agencies.

To regulate these relationships and to prevent unnecessary duplication between their areas of responsibilities and main emphases, a National Council for Higher Education is being established which will coordinate policy in higher education and, as a University Grants Committee, mediate the financing of these institutions between them and the government which is, of course, their main provider. This council, together with the independent governing councils of each university, will help to safeguard the "academic freedom" of the universities while ensuring that they discharge their "academic responsibilities" in the national interest.

Although these universities in Ghana are relatively young, they are, like all other African universities, caught up in the worldwide ferment of the so-called movement of "student unrest." This ferment is at once both universal and peculiar to the particular circumstances of the various African countries. In Ghana it carries both political and social overtones that reflect

the current national scene. The students are not only concerned with national issues but more with such "bread and butter" issues within the universities as better welfare amenities, greater participation in the academic and administrative governance of the universities, and concern for the employment prospects for university graduates in the country which, as elsewhere, have now become much more competitive than in the more spacious days of early independence.

Like their counterparts elsewhere, the Ghanaian universities are also showing signs "of internal strain and malfunction," to quote the phrase of Professor Bruce Williams of Sydney University. They therefore face the need to review and restructure their internal administrative and academic governance, organization, and procedures, and they must particularly ensure that their students "participate" meaningfully and, where it really matters, in their internal academic, residential, disciplinary, and social structures and systems. This participation should not merely "be with it," as the saying goes, or be faddish, but should have as its end the effective intellectual development and social maturity of the students, being so designed to help them the better to shoulder the burdens of adult responsibilities in our growing country. The students need to be reassured about the relevance of their training in terms of the job opportunities available to them in the employment market and, of course, in terms also of their general education for life. This latter is particularly important for their key strategic role in this developing country.

Thus, these universities have to strike a new balance between the market place and the ivory tower, between the "transmission, preservation, and enrichment of learning" on the one hand, and the effective promotion of "development" on the other. These are common tasks facing all universities in the less developed countries, but they acquire greater urgency and also promise in the Ghana and Africa of today.

National policy with regard to the coordination of responsibilities and areas of special interests of the universities to avoid unnecessary duplication of their resources, adequate methods of financing to ensure efficient long-term planning and fulfillment of nationally determined priorities in agriculture, biological research, health, and economic and social development, while at the same time safeguarding their academic freedom and excellence—all of these are measures which will enable the Ghanaian universities to meet the urgent challenges and opportunities before them in the coming decades.



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SPAIN

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Unrest during the last few years at university campuses in many countries has been, to a considerable extent, a side effect of the soul-shaking changes the world is undergoing as a result of its accelerated development.

Development, which amounts to both growth and change, has also affected very directly universities, and these noble and vital institutions of long-standing tradition have not yet been able to cope fully either with the rapid growth of the student population or with the considerable changes and innovations such growth requires.

Consequently, most universities are trying to face problems related to democratization and expansion while reshaping their management, structure, curricula, teaching methods, recruitment of staff, and research programs in order to better adapt to present day needs as well as to foreseeable future trends and developments.

All these measures, however, represent a major and most difficult task, for there is no universal and ready-made solution at hand to answer such numerous and intricate problems, while overcoming long-lasting and powerfully embedded interests.

In this process of both reform and expansion, probably the major risk is that universities remain self-centered—inadequately related to the dynamics and needs of society, and unconnected with the educational system to which higher education belongs and which the universities should lead.

In past centuries, universities could afford to live more in isolation since they were, almost by definition, intellectual islands for the few. But today they are, increasingly, the meeting ground of society in the current move from our present "consumer societies" toward the foreseeable "knowledge societies" of the future.

Universities must once again become not only centers of excellence in training and research but, further, the core, the inspiring nerve center of their respective educational systems. This is also the challenge Spanish universities are facing.

Spain has experienced campus unrest—indeed—but more important, Spanish universities have been unable to satisfy the growing social demand of higher education either in quantitative or in qualitative terms. Only 3 percent of those entering primary education graduated from institutions of higher education. Moreover, classrooms have been chronically overcrowded in some schools of the more populous universities, such as Madrid and Barcelona, while other institutions are working at a level substantially below capacity.

Reform in Higher Education

These and other quantitative problems have been dramatized by out-of-date curricula, routine teaching practices, and limited research work. Existing recruitment methods of professors and management shortcomings have contributed largely to this situation.

Confronted with this situation, the government decided to approach the problem in two major directions.

One was to study the problems of higher education proper, with a view to reform, while simultaneously innovating—on an experimental basis—at five autonomous universities created *ad hoc*.

More important, however, has proved to be the parallel decision to review the educational system as a whole, relating it to higher education and, in turn, to the social and economic evolution of the country in a long-term perspective approach. In this context, an Institute of Sciences of Education was established at each university, while a National Research Center was put in charge of coordinating a country-wide research and development program on educational problems linked to in-service training of teachers at all levels of education.

I shall not go into much detail about university reform in Spain, but any reference to it would be meaningless if it was not made clear from the outset that higher education in Spain today is being expanded at a yearly rate of close to 25 percent and is being profoundly renewed and innovated in every respect in the context of overall educational reform.

Former technical and literary universities are being merged, new campuses have been built in Madrid, Barcelona, Bilbao, and Valencia, and newer ones are soon to come. An Open University is being established with correspondence courses combined with TV and radio lectures and an intensive periodic tutelage. Adults—more than 25 years old and without a

secondary school diploma—are given a new opportunity to enter a university, subject to an appropriate maturity test. The teacher-student ratio has been brought down to 1:50 and is still in the process of improvement. A better distribution of the student population among existing universities is intended through entrance examinations together with new enrollment criteria. Former rigid five-year courses of study at specialized schools or “*facultades*” are now organized at interschool departments after a one-year orientation course, with the possibility of obtaining a diploma-degree after only three years of general academic courses. More specialized two-year programs of study are provided after the diploma for a *licenciatura* degree or master's. Doctoral degree or post-graduate studies follow, as do periodic updating courses according to needs for life-long education. In the context of this new structure, the curriculum is also being profoundly affected with elective subjects chosen by students in addition to the core of compulsory subjects. New teaching methods and modern media are being introduced after experimentation. For instance, research and experimental work is currently being conducted for the use of computer-assisted instruction, among other modern teaching aids.

More recently, each state university has been granted a large degree of autonomy under statutes approved in accordance with the recently adopted education bill. Under these statutes, management has been reinforced and a close link with society ensured through a representative *patronato* or trustees body. Last but not least, universities are now called to contribute more directly to the improvement and guidance of the education system at large.

Reforms at the Primary and Secondary Levels

The educational system has been reshaped in every respect. Its structure now underlines the desirable unity of the whole educational process, discarding any branch or type of school which could diminish equality of educational opportunities, while leaving each school with a considerable degree of autonomy to find its own way in accomplishing its specific educational task. Eight years of compulsory elementary education will become compulsory and free, for poor and rich, in about two more years, as the key to social integration and social mobility. In this connection, all former teacher training schools are being reorganized and attached to universities, and nationwide refresher courses have been conducted by the institutes of sciences of education mentioned earlier.

Those children not continuing with a four-year comprehensive secondary school—including a final orientation course—are provided one

to two years' training in practical skills for existing job opportunities. This is a compulsory alternative.

Similarly, those students not entering higher education, and those leaving university after three years of studies, are provided with appropriate professional training according to employment opportunities. Such training is being organized as a recurrent activity, related to cultural development activities in a lifelong education approach.

The task of universities is thus considerable, but it is also a marvellous challenge.

All this will be made possible thanks to the decision to reform the educational system while accelerating the quantitative expansion initiated in past years. To this end, numerous critical studies were undertaken and meetings of national and foreign experts convened throughout 1968. Beginning in 1969 the government published a white paper prepared by the Ministry of Education and Science, which contains a factual, critical, and up-to-date review of the educational situation in Spain together with broad guidelines for reform.

This white paper was submitted to the public for discussion during a one-year period while the educational law was being drafted, taking into account views expressed in numerous critical reports written on the proposed reform. This process of public participation has contributed to a popular awareness of its necessity and has decidedly resulted in a better knowledge of present educational shortcomings and future desirable goals. One year of the ten-year implementation plan, for which necessary financial funds were voted as part of the education law, has now elapsed. Accordingly, in less than three years the national budget for education has already more than trebled.

Much still remains to be done and further improvements and innovations will be introduced in a spirit of flexibility and progress. But higher education in Spain today appears to be an integral part of the educational process, an inseparable element of a system. Such is the path of hope which education in Spain has started.



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INDIA

D. S. KOTHARI

Higher education is in a state of crisis. It is almost a universal phenomenon and in India it is no exception. It is a recurrent theme of conferences and committees the world over. To recall one of the latest, there was at Mysore in January 1971 a conference on management and organization of Indian universities. The conference was attended by several vice-chancellors and prominent educationists. It was inaugurated by the Union Minister for Education. A widely shared view at the conference was that Indian higher education, rooted in the colonial past, was totally outmoded and chaotic, wasteful and uncreative. It was apparent that nothing less than a radical reform of the system was called for. What was not apparent was the shape and nature of the reform. What exactly was to be done? Who should do it? What about the resources? Educational reform depends upon as well as contributes to economic growth and social change.

Background to Educational Reform

All are agreed that no matter how large the available resources they would be grossly inadequate for the tasks. But there is wide diversity of views about what could be or should be done with the present—admittedly, very meager—resources. How are the priorities to be assessed between competing claims? How are the resources to be divided between average institutions and those striving for high quality? What is a proper balance between teaching and research? Again, not much is known about forecasting of manpower requirements, or how to influence the career choice of students so as to conform to national needs. More fundamentally, how are the available resources to be distributed between different levels of education—elementary, secondary, and higher? These are not easy questions.

And the difficulties are multiplied manyfold in India where some 70 percent of the population is still illiterate. The literacy rate has increased over the last 10 years from 24 percent to 29 percent, as shown by the census in 1971. But the increase by five points in the literacy rate is more than offset by the rapid increase in population. The total number of illiterates is larger today than in 1961—larger by nearly 50 million.

For a moment let me refer to the gigantic problem of providing elementary education to the Indian children. There are today more than 50 million more children below the age of ten years than a decade ago. Incidentally, it means that the average age of the Indian population is decreasing—it has decreased by about 3 years in the last 10 years. India is getting noticeably younger. The problem of rapidly increasing numbers is made worse by a large proportion of dropouts, some 50 percent, in the first four years of elementary school. Such large dropouts prevail in nearly all countries with low literacy rates.

The improvement of primary education, as also the improvement of national productivity and agriculture, depends crucially on promotion of adult education. Progress in programs of family planning also depend on progress in education and eradication of illiteracy. Toward this end the universities and colleges can make a significant contribution. One of the new encouraging factors in Indian higher education is the increasing concern and interest of universities in programs of adult and continuing education. This also serves to bring universities and community closer together.

There is now an increasing awareness in the universities, in the government, and by the public about the urgent and imperative need for educational reform. Even more important is the growing realization that meaningful reforms demand careful thought and preparatory work and time, a certain critical level of resources, and involvement of students, faculty and administration; and above all, zest and dedication. Educational reform in a world of rapid change—in a world powerfully influenced by science and technology—has to be a dynamic and evolving concept. The essential thing is to break away from the rigidity and inflexibility of the existing system and to initiate a spirit of change and experimentation.

In a knowledge-based world, despite local variations, many of the basic issues and problems of education are global in character. In today's situation it is apparent that no country by itself, in isolation from others, can resolve its educational crisis. There is much that countries, irrespective of their stage of economic and educational development, can learn from one another. The developing countries should not be carried away by the educational fashions of the affluent ones. Blind copying or import of foreign patterns of education and educational technology can be suicidal. There is

a desperate need for effective international support and cooperation in conducting research in management and organization of higher education, assessment of performance, and formulation of goals and priorities. Perhaps nothing more than a small beginning has been made so far.

We may ask what contribution the Indian system of higher education has made or could make to other systems of education. Do the Indian universities have a style and mode, ideals and goals, which in some essential respects are uniquely their own? Are there characteristics of Indian universities which distinguish them from their British ancestors of a hundred years ago? The answer by and large is no. There has been no indigenous development such as, for instance, the Morrill Act of 1862 and the foundation of the land-grant colleges in the United States. The Indian universities have new opportunities as never before. There is the great challenge urging them to play a major role in national development, industrialization and social transformation. We desperately need science and technology to raise productivity, but equally we need to accomplish this without distorting and eroding the spirit of science and the essential human values India has cherished over the ages. It is likely that the universities now subject to great pressures, internal and external, will undergo major mutations and adjustments. Their especial contribution may well be an enlargement and sophistication of Mahatma Gandhi's concept of basic education striving to unite manual work, mental work, and moral values. It is, as it were, a creative synthesis of science and nonviolence—of *atoms* and Gandhi.

Great universities, some of the greatest in the world, flourished in India in ancient times. The most famous of them was at Nalanda. It was founded shortly after the death of Buddha, and it continued for more than 1,500 years till about the close of the twelfth century when it was destroyed by foreign invaders. In the days of its glory Nalanda had some 10,000 students and 1,500 teachers, a student-staff ratio of 8:1. These great universities were an integral part of India's religious, intellectual, and cultural life. But this cannot be said of the Indian universities of today. These are not the successors of Nalanda and Takshashila. Their roots derive from the London University of the early 1850s, which was essentially an examining body with little concern for teaching and research. The British ancestry of the modern Indian universities is all too visible and dominant even today. For instance, it is only in the past two decades since independence that there has been any noticeable effort to give a proper place to modern Indian languages in the universities. The situation till recently was essentially no different from that described by the British vice-chancellor of the University of Bombay in his annual address in 1871, 100 years ago. He observed that of the 5,000 students who took the matriculation examination of the univer-

sity in the 12 years since its setting up in 1857, only 25 percent were successful. The main cause of failure was inability to qualify in English. Those who failed in the other subjects but qualified in English were very few.

In view of the considerable interest in and importance of the question of medium of education and place of English in the Indian universities, let me quote from the statement adopted at the Vice-Chancellors Conference four years ago. The statement says "The conference recognized that the change-over in the medium of education (from English to the Indian languages) *if properly carried out* would be a major step toward improvement of higher education and toward strengthening of its roots in our soil. The program should be pursued in a sustained and systematic manner. In the program of change-over the importance of English should be fully recognized and adequate arrangements for its study made at the undergraduate level."

A serious deficiency of the present system of higher education is that a vast majority of students, especially those studying science, technology, agriculture, and medicine, get no exposure at all to Indian literature and to Indian philosophic and cultural thought.

Higher Education Today

There are certain things about Indian higher education which strike us immediately. The first is the huge size of the enrollment. The second is the inherent rigidity of the system, the existence of affiliated colleges and external examinations. The third thing I should like to draw attention to is the deliberate effort devoted in recent years to development of quality institutions, such as the universities for agriculture, the Indian Institutes of Technology, and the centers of excellence for science and humanities in the universities.

Let us consider the size of the system. At the time of independence in 1948 there were 20 universities. The number is now 83. These include 14 universities almost entirely devoted to agriculture. Their development has been greatly assisted by the United States. Besides the 83 universities there are some 20 institutions of university status. These include the five Indian Institutes of Technology set up with foreign assistance and providing a splendid example of international cooperation of technical education. The *Vidyapeeths* at Ahmedabad and Varanasi founded by Mahatma Gandhi and his close associates, at the height of the noncooperation movement, to serve as centers of national education, were granted university status in 1963 under the Act of the University Grants Commission. I shall say a few words about the UGC later.

The total enrollment in higher education is nearly three million. It is

increasing very rapidly. The growth rate exceeds 10 percent a year. In a single year the increase in enrollment now exceeds the total enrollment in higher education for the United Kingdom. Of the total enrollment of 3 million only about 10 percent is in institutions or departments directly maintained by universities. The vast majority of students attend some 3,500 colleges affiliated with the universities. About one-fourth of the colleges are maintained by the government, the rest are privately managed, receiving grants from the state. Less than 5 percent of the total enrollment is in evening colleges and correspondence courses, but this is increasing.

The age of students entering higher education is about 17 years. The school education is generally of 11 years' duration. About 4 percent of the youth enter college. For a person of college age the chance of entering college is ten times higher than at the time of independence. For a Delhi youth the chance is five times more than the national average—the same would hold more or less for other larger cities. As is to be expected, there is a wide variation between states, and college entry depends much on social status of parents and on caste in some cases.

A little over 10 percent of the total enrollment is in technology, medicine, and agriculture. An overwhelming majority of students study arts and humanities. This is so much easier to provide than applied sciences and medicine. Apart from medicine, technology, and a small number of prestigious institutions, the admissions are nonselective—an open entry, as it were. I mentioned earlier that 4 percent of the relevant age group enter higher education. I should add at this point that a considerable part of what is included in Indian higher education would be a part of secondary education in educationally and industrially advanced countries. In terms of international comparability, the proportion of the relevant age group in higher education in India would be less than 1 percent—one of the lowest in the world—as compared to 30-40 percent for the U.S.A., and about 10 percent for the U.K.

The great upsurge in Indian education in the last 20 years has been impelled by social pressures and rising aspirations. It has brought higher education within reach of people who a generation ago had hardly any access to it. The social benefits of educational expansion with its contribution to mobility and erosion of traditional barriers is no small gain. Sometimes this is not fully appreciated. The explosion of numbers has, on the other hand, adversely affected the general level of academic standards. This seems inevitable. Whereas the enrollment is doubling in less than 10 years, it takes very much longer than ten years to double the number of competent teachers. Further, with expanding enrollments, unless the national economy is developing rapidly, expenditure on higher education

per student in terms of real value of money, instead of rising, goes down substantially. This is what is happening in India. The Indian Education Commission in 1882 noted that the cost per student per year in government colleges at that time was about Rs. 350. This in terms of purchasing power would be many times higher than the cost per student today.

The number of women students in Indian higher education has grown at a very fast rate, much more than the growth rate for total enrollment. In 1887 the vice-chancellor of the Calcutta University said at the annual convocation, "Another event has happened which may prove an isolated accident, or may prove the harbinger of an important movement. A young native Christian woman applied to be admitted to our entrance examination." At the beginning of the century the number of women students was less than 500. Today it exceeds 500,000. There is also a women's university in Bombay with an enrollment of 10,000. In the Delhi University, women students form more than 40 percent of the total enrollment.

It may be observed that since the establishment of the universities in India 100 years ago the enrollment has been doubling, on an average, every 10 years or so. The corresponding figure for the United States is about 15 years. These are close to the doubling period for the growth of science and technology, but it is not clear if this is anything more than a mere coincidence.

Obstacles to Innovation

I turn now to the rigidity of the Indian higher education system. Most of the universities have a large number of so-called affiliated colleges spread over an area of several thousands of square miles. The University of Calcutta, the largest of the Indian universities has some 200 affiliated colleges and an enrollment of 200,000. There is hardly any interaction between a university and its affiliated colleges. The colleges must teach the curriculum prescribed by the university, but it is the university which conducts examinations and awards degrees. The colleges teach a curriculum in the framing of which they had little participation, and prepare students for an examination which is conducted almost entirely by external teachers. In such a system there is not much room for initiative and innovation. The affiliated colleges in any particular university would, as one would expect, vary widely as regards quality of staff and students, library and laboratory facilities, student amenities, and so on. Yet they must all follow the same curriculum, and their students must all take the same examinations. If it is a question of improvement of curriculum, or of examination reform, or anything else, either there must be a simultaneous, a synchronized, change

In all the colleges of the university, or there is no change at all. A change at the same time in all the colleges, even if it could be introduced, is almost certain to be frustrating because of the wide diversity in motivation and resources of the colleges. The system of affiliated colleges makes the thing so huge, so inert, that to bring about any noticeable change a nearly infinite amount of effort and initiative would be required. A major reform urgently called for is to devise some mechanism which would liberate outstanding colleges from the rigid uniformity of the present lockstep system. Colleges which have adequate motivation and resources and the right climate should be free to move ahead. This is the concept of the *autonomous college*. The university would exercise a measure of general supervision, but otherwise an autonomous college will be free to prescribe its courses, combinations of subjects, admission of students, and recruitment of staff. The degree would be awarded by the university to which the autonomous college is affiliated. The Education Commission which the Government of India appointed in 1964, and which submitted its report in 1966, strongly recommended the adoption by the universities of the concept of autonomous colleges. A good deal of thought has since been given to it by the University Grants Commission and the universities. Despite serious difficulties it is likely that the scheme of autonomous colleges will be introduced in the near future. This would be a major reform of Indian higher education.

I may perhaps also mention at this point about the structure and governance of universities and colleges. The structure and pattern of university governance is very much reminiscent of what prevailed in the University of London in the early 1850s. These were not the days of glory of the London University. Again, what was perhaps adequate for universities and colleges of small size, teaching a nearly unchanging curriculum, and contributing little to research, has become totally inadequate and irrelevant when student numbers have increased a hundred fold and knowledge has expanded at a fantastic rate. A committee of the University Grants Commission under the chairmanship of the vice-chancellor of the Bombay University, Dr. Gajendragadkar, formerly the Chief Justice of the Indian Supreme Court, is currently examining the entire question of university and college governance as well as the participation of faculty and students in academic affairs and governance.

Advances in Higher Education

I now come to what may be called the quality sector of higher education. The special attention paid in recent years to education for agriculture and technology, and the development of a small number of centers

of excellence in universities are important steps of great significance and potentiality. There are the five Indian Institutes of Technology set up in the last 15 years. The enrollment in the Institutes of Technology is about 10,000. This is about 10 percent of the total number studying technology in universities and colleges in the country. The agricultural universities, now numbering 12, set up with the cooperation of the United States, give special emphasis to integration of teaching, field work, and research. The first agricultural university was set up in 1960. The agricultural universities have made a notable contribution to improving agricultural productivity.

A special mention should be made of the University Grants Commission's scheme of centers of advanced study in the universities. There are 30 centers, 17 in natural sciences and 13 in humanities and social sciences. The centers have received valuable assistance from the U.S.S.R. through UNESCO.

The expenditure per student in the centers of advanced study is about 10 to 20 times the national average for higher education. As the number of centers is very small, the total expenditure on them is only a small fraction of the total expenditure on higher education.

I may add that at the undergraduate level the cost per student per year in higher education is, for most countries, comparable to the per capita GNP of the country. For India the GNP is about Rs. 500 (\$70) a year; and that is comparable to the yearly cost of college education per student. But when it comes to advanced study and research, especially in science and technology, the costs in different countries, developing and advanced, become comparable. This is understandable. It means that a country such as India can only provide a much smaller proportion of institutions of high international quality in relation to its educational system than affluent countries can and do. For the success, at this stage, of the scheme of the centers of advanced study, it seems essential that expenditure on them does not exceed, say, 5 to 10 percent of the total outlay on higher education. In other words, establishing the centers should not mean more than a marginal deprivation of the resources devoted to the bulk of institutions in the country. Further, it is important that there are also other programs for improvement of quality available generally to universities and colleges. Perhaps the most important of such programs we have is that of the science summer institutes organized in cooperation with the National Science Foundation of the U.S.A. The summer institutes are at various levels, from research to undergraduate teaching.

University Grants Commission

Let me say a word about the University Grants Commission set up

in 1956 under an Act of Parliament. Under the Indian Constitution education is a State subject—not a Union subject. But the Center has responsibility for coordination and maintenance of standards of higher education, and for promotion of technical education. The University Grants Commission is an autonomous body. It receives its funds from the central government—now about Rs. 300 million a year. The Commission's funds are for development of universities—that is, for capital expenditure generally. The maintenance grants to the universities are provided by the state governments. Under the act the Commission's responsibility covers all sectors of education. In practice, however, the Commission has not been dealing with agriculture and medicine. Agricultural education is looked after by the Indian Council for Agricultural Research set up by the Ministry of Agriculture. The Ministry of Health deals with medical education.

The basic idea governing the working of the University Grants Commission is that development plans for education and formulation of policy is left to a "judgment by peers." It is a system which enables universities to have an effective share in formulation of major education policies and distribution of funds. The Commission functions through committees—review committees, visiting committees and other special committees—composed largely of university men.

I have given a brief and somewhat cursory description of Indian higher education. I have barely touched upon the most important problem facing us which is to link education with productivity. This is engaging the earnest attention of the universities, the government, and the industry. It was Gandhi's concept of education that it should be work-oriented and directly related to the economic and social goals of the community. Gandhi used to say that for him the touchstone for judging the merit of a proposal or an action was the benefit, however small, it would bring to the lowliest man in the country. For education itself there could be no more noble and meaningful touchstone.



Karelis Posthumus was government commissioner on higher education for the Netherlands from 1967 until his recent death. He was also a chemistry professor at Eindhoven's Technological University, an institution which he headed as Rector Magnificus from 1963 until 1968. Educated at the Universities of Groningen and Leiden, he had a doctorate in mathematics and physics. He began his career at the age of 20 teaching chemistry at the Hoge Burgerschool in Leiden. He later taught and became rector at a Lyceum in Bandung, in what was then the Dutch West Indies. From 1943 to 1946 he was director of the Government Information Service in Indonesia, later becoming professor of chemistry and dean of the Technological University in Bandung.

THE NETHERLANDS

KORNELIS POSTHUMUS

The Dutch national income grew between 1950 and 1967 at the rate of 9 percent per year. The total government expenditure on education and the sciences rose during that period at the rate of 14.5 percent per year. The expenditure on university education and research increased by 21 percent per year. In 1967, 7.5 percent of the national income was spent on education—the highest percentage in Western Europe. This growth continued in subsequent years.

A simple calculation gives an absurd answer. If the development continues at the present rate, by the year 2005 the total national income will be needed for university education and research. The Dutch population will consist entirely of university teachers, assistants, and students who, in their spare time, will grow potatoes and vegetables in their gardens, keep chickens on their balconies, cultivate tomatoes in their bathrooms and teach their own children in their living rooms. The numerical possibility of the continuation of this development is real.

Demand for Higher Education

Also the motives for the choice of an academic field of study are multiple and varied. In the first place, ability and interest motivate the choice of a certain type of study. Second, many young people, after having completed their secondary school education, feel little enthusiasm for the sort of job they can then get. Finally, there is the desire for social position, the attainment of which makes a university degree necessary or useful, and the status and income attached to such a position are attractive. Dutch academic titles are placed before the name of the holder; Dutch civil law makes the misuse of such titles punishable—just as is the case with the illegal use of inherited titles of nobility.

One gets the impression that academic titles become more coveted in proportion to the degree in which, in an increasingly democratic society, inherited titles command less respect.

Financial objections need hardly form an obstacle to the commencement and continuation of academic study. University fees until 1970, amounting to 200 guilders (\$56), need be paid only four times, for an amount of 10 guilders (\$3) annually one can be enrolled as a student for life. The parents of students between 16 and 27 receive from the government, from their employers, or from social sources, a family allowance; deductions are granted in the calculation of their income tax. The total of these amounts, which has little to do with income but depends mainly on the composition of the family, forms an average amount of 2,000 guilders (\$560) per student per year. Expenses incurred on behalf of students who are 27 and older can be subtracted from the taxable income.

In addition, students from families with low incomes can obtain from the state either a scholarship or an interest-free loan. Their income, consisting of a limited contribution from their parents (which contribution is waived for those with low incomes and/or large families), in addition to the family allowance and the tax relief, is in this way raised to 5,160 guilders (\$1,445) per year. The percentage of young people going on from secondary school (where they prepare for the university) to the university is high because of this assistance. In 1970 for instance, the figure for the male school-leavers was already 48 percent, and this is constantly increasing. The fact that, in spite of this, the external democratization of university studies is still so limited must be ascribed to the high psychological and cultural threshold which lies, after the completion of compulsory education, between primary and continued education.

The demand for education, as a full day's occupation removed from the care of providing a living, is however now already so large and is developing so rapidly that it will be one of the big social and political questions in Holland during the seventies.

According to the latest forecast, the number of university students, which amounted to about 100,000 in 1970, will have increased to 175,000 by 1980, if no controlling measures are taken.

Now that, thanks to the prosperous Western society, deficiencies in the agrarian and industrial sectors have been dealt with, shortages are appearing in the services sector, in which the daily education of young people between kindergarten and university age falls. Also, in Holland questions regarding tertiary education are coming strongly to the fore. It is necessary to give a short summary of the existing structures before passing on to the description of proposals for reconstruction.

System of Higher Education

Tertiary education can be divided into two forms—university education and advanced vocational and technical education. Until 1965, these two forms were pretty much separated—each had its own admission system, and there were great difficulties in transferring from one to the other; there were different final diplomas affording different social benefits. During the past few years awareness has rapidly grown of the need for “unity in diversity.”

The establishment of a university is one of the first symbols of national independence. After the siege and relief of Leyden in 1574 (during the 80 Years' War waged between 1568 and 1648 against Spanish domination), William the Silent presented the city with a university; this is the oldest university in Holland and will celebrate its fourth centenary in 1975. In 1870, there were three state universities, with more than 1,300 students. In 1970, there were, for a population of more than 13 million, 13 establishments with 100,000 students.

Since 1960, Dutch law speaks not of “higher education” but of “scientific education.” The 13 establishments are divided into “universities” and “high schools.” These high schools must not be confused with American high schools; they differ from the universities only in the number and nature of their faculties. Universities and high schools have the same aims: they teach, practice the sciences, and further an awareness of social responsibility.

The aims of the education are also identical: development of the ability to pursue the sciences independently, preparation for the holding of positions in society for which an academic training is necessary or useful, the advancement of insight into the relationship between the sciences. The technical, economic, and agricultural “high schools” generally refer to themselves internationally as “universities,” and in this discourse that practice will be followed.

Eight of the nine public universities are controlled by the state and one by the municipality of Amsterdam. Of the four “private” establishments, two are Roman Catholic in character, one is Protestant and one is nonsectarian.

One of the conclusions reached in the handbook issued by the American Council of Education entitled *American Universities and Colleges* is that “The outstanding characteristic of the American system of higher education is that it is not a system at all.” This is certainly not true of Dutch university education, which is controlled in quite a detailed manner by one law. The municipal and “private” universities can be considered for subsidies only if they adhere to a substantial part of that law. If they

do so, they receive a refund of 100 percent of their deficit. Thus, actually, the state finances Dutch university education completely.

There is uniformity in regard to the structure of the board, rulings for teaching, examinations, and degrees, conditions attached to the appointment of teachers (all Dutch professors receive the same salary!), and rulings regarding the admission of students (this takes place on the basis of diplomas from certain types of secondary schools, and no further entrance examinations are necessary). *Diplomas of the same type issued by different universities have in this manner the same social value.*

As opposed to this structural uniformity, the old ideal of academic freedom has remained unweakened. Freedom of learning, freedom of teaching, freedom of research, the right to study whatever and as long as one will, the right to teach what one will, the right to conduct and take examinations whenever and as often as one will.

Until 1960 the factor of time was not mentioned in Dutch legislation. In that year came a change: the faculties were commissioned to establish a ruling in regard to the "most desirable duration of study;" this commission has had no noticeable influence upon the statistical results of the examinations.

These statistical results have steadily attracted more attention, in relation to the increase in the number of students. They are different for female and male students, for different studies in the same establishment, for identical studies at different establishments. They compose globally the same result which has been established in other countries: 55-60 percent of a generation of students commencing together eventually obtains the desired final degree. But in Holland the students often take a long time to do so; of a generation of students starting together, more than half are still enrolled after seven years without having taken their finals. The general age of students enrolling for the first time has been up until now 18, while the average age of candidates who succeed in their finals is 27 1.

A reconstruction of the system of secondary school education, begun in 1968, will lead to an increase in the age of the students enrolling for the first time. Already the general impression is that Anglo-Saxon graduates are quite a bit younger when they enter society than their Dutch counterparts and that this difference in age is not coupled with a difference in preparedness.

This is also the reason why since 1946 measures have been sought to lower the average duration of study preparatory to the final examinations. In the sixties it also became obvious that an uncontrolled continuation of the practically explosive growth of university education is, for sociological and economic reasons, unacceptable.

The questions of the increase in the number of students and in costs have been playing a much smaller role in *advanced vocational and technical* education, which is subdivided into a series of *types* of schools: technical, maritime, agricultural, economic and administrative, pedagogic, socio-pedagogic, art and applied art, and others. Admission of students—who belong to approximately the same age group as the university students—is open to qualified candidates from a number of secondary schools with shorter courses of study than those preparing scholars for university education. In 1970, there were 332 schools in Holland with nearly 70,000 pupils. The greater part of the schools are “private” establishments subsidized by the state.

Dr G. H. Veringa, Minister of Education and the Sciences, has since his inception in office in 1967 made a fresh effort to solve questions of duration of study and the structure of university education, as well as questions of numerical output and the legal regularization of the whole tertiary education system.

Student Unrest and Educational Reforms

In 1968, the international academic revolution also reached the Dutch universities. Young intellectuals expressed their disapproval of the compulsion of the system, of authority, hierarchy, the mandarin system and professional idiocy, of being regarded as human capital, as a means of production, and as consumers. They also disapproved of being determined, selected, directed and manipulated, and of “repressive tolerance.” Their resistance was directed not only to university systems and structures, but also to all other large institutions: the bourgeois culture, justice and the police, the political parties, the churches, bureaucracy, business life, the armed forces, and also to marriage and the family. They asked for participation, for the right to join in discussions and the making of decisions, for direct democracy. The renewal of the university would have to be coupled with a fundamental criticism of society as a whole and the abolition of the capitalist system.

The actual revolt was less violent in character than in the United States, France, and other countries. The occupation of the Roman Catholic University in Tilburg was peaceful, the occupiers of the central administration building of the Amsterdam Municipal University had to be removed by the police, they were arrested and sentenced in court to imprisonment or the payment of fines. During 1970, again, the Dutch students' resistance movement was ineffective because of internal differences and disappointment in the results, although new forms of criticism, protest, and action are to be reckoned with.

do so, they receive a refund of 100 percent of their deficit. Thus, actually, the state finances Dutch university education completely.

There is uniformity in regard to the structure of the board, rulings for teaching, examinations, and degrees, conditions attached to the appointment of teachers (all Dutch professors receive the same salary!), and rulings regarding the admission of students (this takes place on the basis of diplomas from certain types of secondary schools, and no further entrance examinations are necessary). Diplomas of the same type issued by different universities have in this manner the same social value.

As opposed to this structural uniformity, the old ideal of academic freedom has remained unweakened: freedom of learning, freedom of teaching, freedom of research, the right to study whatever and as long as one will, the right to teach what one will, the right to conduct and take examinations whenever and as often as one will.

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Proposals for the reorganization of teaching and examinations, and for an integral ruling regarding tertiary education, met with serious delays.

Also, priority was given to the alteration and democratization of the form of university supervision. The bill for "University Control Reform" was passed by parliament in 1970.

Until then, the direction had been in the hands of curators and the senate, with the cooperation of the faculties. The curatorium consisted of at least five and at the most seven members, prominent figures in society appointed by the Crown. At nearly all establishments one or two members, bearing the title "delegated curator" worked full time. The senate consisted of all professors and became such a large body that hardly any effective control emanated from it. The chairman of the senate had the title of "rector magnificus," and was chosen by his colleagues for a period of between one and four years. He formed, together with a curator and with the university's secretary, a group responsible for the day-to-day affairs. The faculties were formed and managed by the professors themselves.

In the new structure, the university is controlled by a university council. This council consists of a maximum of 40 members, of which a maximum of five-sixths are members of the university community. At least a third of the seats of these university members are assigned to members of the academic staff (professors, lecturers, and academic associates), a maximum of one-third of the seats is for the students and a maximum of one-third is for other members of the university staff.

Those members who are not attached to the university community are appointed, at the council's recommendation, by the Crown. The remaining members are chosen by those groups to which they belong; if less than 35 percent of the voters of a particular group cast a valid vote, only a proportionate number of the seats destined for that particular group is occupied.

The board of governors consists of the rector magnificus, who is chosen by the board of faculty deans; two members of the scientific body elected by the university council, and two members appointed by the Crown, in consultation with the members named by the university council.

Corresponding structures are prescribed for the administration of faculties, subject groups, work groups and institutes; however, the faculty council itself chooses the faculty administration and its chairman.

The first elections were held during the months of April and May 1971. Groups of radical students which are still in existence called for the boycotting of the elections. A lot of work will still have to be done and

a lot of experience acquired before a well-functioning administrative organization has been built up. On the first of September 1971, the new structure will come into operation in most establishments. On the 28th of April, general elections were held for the Second Chamber of the Dutch parliament. On that day, as is the custom, the cabinet tendered its resignation. During the weeks or months following, negotiations will take place in regard to the formation of a new cabinet.

On the 27th of April, the Ministers of *Education and Sciences* and of *Agriculture and Fisheries* presented two bills to parliament. The first bears the title "Reconstruction of the Legislation Concerning Scientific Education" and the second, "The Preparation of an Association between Advanced Vocational and Technical Education and Scientific Education."

Until now, university studies have been characterized by two examinations and the possibility of an eventual doctoral promotion after the successful defense of a thesis. The "candidate" examination has little social significance, the "closing" examination gives the right to the title of *doctorandus*, a title which can be compared with the American master's degree. This title originally conferred only "admission to candidacy for the doctorate," but nowadays it is a degree in itself. It also gives the right of admission to studies to qualify as doctor, chemist, dentist, veterinary, and psychologist, eligibility as a secondary school teacher (after the completion of a supplementary pedagogic didactic study), and to many other positions. It has already been pointed out that the factor of time does not play a role in the prescribed rulings regarding teaching and examinations.

On several occasions an attempt has been made to introduce a "bachelor's degree" in the Anglo-Saxon style, but these attempts have been unsuccessful. In cases in which the degree did not provide admission to further studies, it was chosen by very few students. Wherever the possession of the degree made possible a continuation of study for the doctoral examination, it was chosen by practically everyone.

In the new bill a "time structure" is proposed whereby both the duration of the phases of the teaching of the course and the duration of enrollment as student are controlled.

Teaching is given in two phases. The preliminary phase, lasting as short a time as possible, is rounded off by a preliminary examination and has a selective character. It should be able to help the student toward a personal choice, toward an answer to the question whether or not he is suited to the type of study he has chosen and to the type of employment which its completion will afford. It must enable the faculty to give a *consilium abeundi*, advice to the student on the advisability of continuing the study chosen. In the second phase, rounded off by the doctoral examina-

tion (the successful completion of which affords the right to the title of *doctorandus*) selection stands in the background. The faculty should consider itself responsible for the students it has accepted, the student for the study he has chosen and for the fact of his acceptance.

A "candidate" examination is not required for selection, the possibility of accepting the testimonial "candidate" is maintained to make possible the continuation of interdisciplinary studies (philosophy, languages, economics). He who abandons the study before the successful conclusion of the doctoral examination receives a declaration which states which sections of the examinations he has successfully completed.

In order to take into account individual differences in study tempos, the duration of enrollment as student for each of the two phases is set at a year longer than the duration of the course. At the expiration of this period, the right to teaching and student facilities lapses, as does the right to the family allowance and fiscal facilities enjoyed by the parents. The right to attend lectures and take examinations as an extramural student continues, however, within the limits of available space. These rulings attempt on the one hand, for reasons of social justice, to limit the use of fiscal advantages and educational facilities, and on the other hand to take into account possible "late flowering" of young people. The extramural student who passes the preliminary examinations can be enrolled afresh as a student.

In the bill it is assumed that the reconstruction of the system must at the same time encourage the advancement of university research. The faculty can admit a person in possession of a doctoral degree to a course leading to the acquisition of a certificate regarding the execution of academic research. In addition, there is the creation of a new university function, that of assistant research worker. Such assistant research workers are appointed temporarily and are generally not obliged to teach, their task is usually completed by their promotion to doctor.

Finally, the design of the bill charges the university with the responsibility, insofar as possible in cooperation with third parties, for the creation of opportunities for post-academic education for those already in employment.

It has already been mentioned that up until now the duration of academic courses was not regulated by legislation. Because of organizational reasons, the duration in different faculties and types of study has acquired an informal content, which in the case of doctoral studies practically always amounts to five years. The informal content varies widely for the candidates' examinations.

The bill suggests allowing one year for the preliminary phase of the

course and three years for the doctoral phase. In terms of a Royal Decree (an academic statute), it can be decided that in exceptional cases the duration of a course in a particular field of study can be extended in one of its phases for a maximum of one year. Also, account is taken of the personal circumstances of students, in that the faculty can extend the enrollment duration of a student for a period at its discretion.

After the bill and its explanatory memorandum were ready, there appeared in January 1971 the "Special Report and Recommendations" of the Carnegie Commission on Higher Education, entitled *Less Time, More Options*. Although the problems in the United States are in many respects very different from those in Holland, it can be postulated that not only the arguments but also the recommendations and solutions are in practically all cases identical to those contained in the Dutch bill.

The second bill presented to parliament on the 27th of April 1971 embraces the "preparation for the association between advanced technical and vocational education and academic education." This bill does not go as far as the other and, in anticipation of the creation of a bill controlling all tertiary education, cancels a number of the definitions which were valid up until now. Thus the way is opened to the making of partial rulings and experimentation.

The experience of the last years has shown that a joining of the two forms of tertiary education leads to great difficulties. Public opinion often views academic education as on a "higher" level than advanced vocational and technical education. The conditions of participation in university examinations are regarded as being more demanding than those for the acquisition of diplomas from the "high schools." The duration of university studies has been longer, until now, and the duration of the university enrollment period still longer than for the other establishments.

The university is an open system which can be distinguished but not separated from the cultural, social, and economic pattern of life. In an increasingly secular world the university cannot take over the role of the church. It cannot be more than a forum and an agora, a meeting and discussion platform for current scientific and academic movements. It must continue in this role if it does not want to be an ivory tower. It is hoped that within the renewed structures of management, teaching, and research, possibilities will become greater.

The realization of this hope is the privilege and responsibility of those taking part in university life.



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JAPAN

HERBERT PASSIN

Since the end of World War II Japan's higher education has made spectacular progress. In 1946-47, on the eve of the U.S.-sponsored reforms, Japan had 48 institutions of university standard and 113,320 students attending them. With the exception of about 300 women permitted to attend a few graduate departments, the entire student population was male. The highest level women could reach in the national school system was the junior college. However, we should note that the women's junior college provided, at its highest levels, several schools for the professional training of women in dentistry and medicine.

The pre-reform universities formed a clear and explicit prestige ranking order; therefore the entrance examinations were desperately competitive. The preference for a "good" university was no mere academic matter. The rank of the university the student succeeded in entering was virtually decisive for his future life chances.

Although the majority of students were registered in the 26 private universities, it was the 19 national universities that were the most highly regarded. With the prestigious imperial universities—of which Tokyo Imperial was the glittering capstone—as their core, these latter provided virtually all of Japan's top leadership in all fields—government, politics, business, journalism, higher education, and so forth.

Postwar Reforms

The U.S. reforms brought enormous changes. They were designed primarily to transform a multitrack, elitist system into some approximation of an idealized U.S. system, that is, single-track, open, with enormously expanded "democratic access to higher education." Overnight, the univer-

sity population doubled and so did the number of universities. Women's colleges were upgraded into universities, and women made their first hesitant appearance on the great prestige campuses hitherto exclusively reserved for men. The university population growth rate has averaged 10-11 percent annually (compounded), just barely keeping up with GNP.

Today Japan has over 1.4 million students distributed in 380 universities, about 22 percent of the 18-21 year old age group, as compared with about 2.5 percent before the war (1936). This figure places Japan second only to the United States. Even more significant is the figure for men, since their impact on the quality of the future labor force is greater. Over 35 percent of them are now attending university, and there is every reason to expect this proportion to reach average U.S. levels very soon. This has already happened in senior high school attendance—today over 80 percent—and university attendance cannot be far behind. In the last few years in the metropolis of Tokyo, 80 percent of the boys have been applying for university entrance and 47 percent have been accepted. Thus, university attendance in Japan's advanced urban areas is already at the U.S. level. Although women's attendance has also increased dramatically, women have not been as enthusiastic about going to university as men. Women still constitute only about 18 percent of the total university population. (If we count the junior colleges, where they are overwhelmingly in the majority, the proportion rises to almost 30 percent.)

In a sense, therefore, the success of the U.S.-inspired reforms is undeniable. But through the operation of the same historical irony that is afflicting all the advanced industrial societies, Japan's very success has created vast new problems. We can see the ambiguity of this success very clearly in the student revolt. In Japan, the current phase started earlier, involved more universities and students, and lasted longer than anywhere else. Paris and Columbia University exploded in April-May of 1968, but Tokyo University's medical school had already started exploding in January. The revolt quickly spread from there to all the other faculties, shutting down the university for over a year, and making it impossible, for the first time in its history, to enter a freshman class. By October 1969, the high point, 77 out of 379 universities were in some degree or other of serious conflict, and these 77 included virtually all of Japan's best and most prestigious universities. It was only the rigorous application of the University Normalization Law, which allowed more effective police response, plus student exhaustion that brought peace to the campuses by late 1969/early 1970. Kyoto University, Japan's second most prestigious, was finally able to hold its regular graduation ceremonies for the first time in three years this March.

Japan's universities can be divided into three sectors. Seventy-five national universities with 22 percent of the student population, 33 public universities (that is, those supported by municipal or prefectural, rather than national, governmental entities) with 3.4 percent of the students, and 274 private universities with almost 75 percent of the enrollment. About 15 percent of all universities can be characterized as religion-related, that is, they are now or have been in the past associated with some religious organization. Most of them are Protestant in origin, and most of them have much higher proportions of women students than the average for the country as a whole. However, there are important Buddhist and Catholic institutions as well, some of them providing specifically for the preparation of priests, some aimed at believers alone, and some offering a nonsectarian curriculum. At various times during the last 100 years Christian schools, particularly those of missionary origin, have had problems with the state or with their own constituencies, but this has not been the case since the end of World War II.

Problems in Higher Education

While the reform solved some historical problems of Japanese higher education—by creating a single-track nonelitist system, eliminating discrimination against women, and vastly increasing access to the university—it did not solve all of them, and it even created new ones. It failed, for example, to destroy the university prestige hierarchy. Although a handful of private universities have improved their ranking slightly and there are minor adjustments here and there, the basic picture is not unlike that of prereform days, although the canvas on which it is drawn is much larger.

At the top of the pyramid we find Tokyo and Kyoto Universities and just below them the 7 other former imperial universities plus a few distinguished national universities. They have the best faculties, the best facilities, the most favorable faculty-student ratios, the best libraries, and the highest budgets in the country. Naturally, they attract the best students. At the next level come the remaining 17 national universities, plus a small handful of private and municipal universities. The next stratum includes the 46 nationally supported prefectural universities plus the better private and municipal universities. And so on down the line.

Because this ranking structure still persists despite the educational reforms, the competitive entrance examination system has become anything, even worse than before the war. Before the war only a few were caught up in this desperate scramble for place; today the millions have gone through this experience run into the millions.

500,000 young people go through the examination agony every year, and several hundred thousand repeaters go through it twice or more (in 1970 alone, 180,000) spending the time in between cramming at home or in formal schools in preparation for their next chance. (More than one-half fail to make it on their first try.) And since boys are more ambitious and attend university in larger numbers, the proportion of the male generation between 18 and 21 years of age that has gone through this examination hell is even higher. In other words, the agony of the elite has been democratized and has now become the agony of the masses.

The postwar university reform was only partially successful in another area: the elimination of the chair system of organization of faculties, which Japan copied from European models in the late nineteenth century. Although many of the newer—and therefore less prestigious—universities have adopted the U.S.-style department system, the chair system remains if not intact, then only partially modified in the leading national universities.

Financing

While the reform could not eliminate some of these traditional problems but only project them on to a larger canvas, the rapid educational development exacerbated the quality difference between public and private universities. The cost of educational development fell differentially on the public and private sectors. Although the public universities are funded by the national budget, the private universities have carried the brunt of the increased enrollment. Before the war the private universities enrolled about 60 percent of the students (1940 figures), today they enroll almost 75 percent. And this percentage has been going up the past few years.

Since the private universities have virtually no endowments and must depend primarily on student fees, bank loans, and contributions, their average expenditure per student is about one-sixth that of the public sector. At the same time, the average fees per student are over five times as high. Private universities must cover 92 percent of their recurrent expenditures from student fees, as against only 5 percent in the case of the national universities. While national university fees can be held down as a matter of policy because the funds come from the government, the skyrocketing of private university fees has become one of the underlying factors in university unrest.

Until now all proposals for government aid for private education have stumbled over a roadblock written into the Constitution by the American Occupation. According to Article 89, "No public money or other property shall be expended or appropriated for the use, benefit, or mainte-

nance of any religious institution or association, or for any charitable, educational, or benevolent enterprises not under the control of public authority." However, the situation is so desperate today that Article 89 is being reinterpreted much less restrictively to allow some channeling of public funds to the private universities. Clearly the distinction between private and public is losing its meaning. The higher education of an entire generation can no longer be regarded as a private matter; it is a national subject of the highest importance. Since 1970, the government has started to subsidize, through a newly established Private Universities Foundation, 15 percent of the personnel costs of the private universities. By 1974, this figure is scheduled to go up to 50 percent.

A wide variety of other subsidy plans have been put forward, such as direct unrestricted grants, a flat sum per student enrolled, noninterest long-term private bank loans to students, subsidization of student tuition fees, payment for specific services, subsidies for the maintenance of expensive facilities (such as laboratories, medical schools, and so forth). Increased government aid will probably use some of these methods.

Although the government is likely to provide most of the funding, private contributions will also have to increase by a considerable order of magnitude. Some new kind of institution, perhaps on the order of the general purpose U.S. foundation, will probably have to be created to mobilize the resources of the private sector, particularly from the business world.

If all universities come in the end to be funded by a similar mix of public funds, private contributions, and student fees, then the traditional distinction between public and private will lose its meaning, as seems to be the case in England. Although these prospects are agreeable in certain respects, they stir deep anxieties, whether justifiable or not, about possible government interference and the future of university autonomy.

University Autonomy and the Role of Government

Before the war, the Ministry of Education had far-ranging authority, particularly in primary and secondary education. One of the principal objectives of the postwar reform was to encourage local and private initiatives through reducing the centralized authority of the ministry. This policy has been only partially successful. In higher education the ministry's legal authority was always limited by the national universities' strong, prideful tradition of autonomy and by the private universities' independent financial situation. The ministry still has ultimate legal control over private universities through its chartering authority, but in fact they are virtually unfettered except for quality control supervision. Recently, for example,

four private universities announced plans for the extension of existing medical facilities or the building of new ones. The Ministry of Education vetoed them on the grounds that they were underfinanced. This degree of action in the public interest scarcely seems a dangerous interference with university autonomy.

Although the national universities are more clearly under the ministry's legal authority, they have such deeply entrenched institutions of self-government that no ministry would lightly undertake to tamper with them. Even the prewar militarist-controlled governments rarely dared interfere with the university, and when they did so it was usually in a roundabout way. For example, instead of openly stepping in and firing a professor, the government preferred to use backstairs pressure on his colleagues to vote him out so that his dismissal was technically not a violation of university autonomy.

Clearly, then, if the prewar militarist governments had to tread so carefully, the postwar Ministry of Education must be even more cautious. The Japanese national university is, in certain respects, the outstanding example in the world of a university completely run by faculty. Although it must deal with the ministry for its basic budgetary allocation, it is completely autonomous internally. All appointments, promotions, and so forth are made by faculty vote; deans and chairmen are elected by the relevant faculties, the president is elected by the franchised faculty (in a few cases with some student participation), and ultimate formal authority lies with a faculty-elected senate or council of some kind. Although in principle all decisions are subject to ministry approval, the ministry would almost never dare reject them, particularly in the case of the great prestige institutions. When a few years ago the ministry raised the possibility of playing a more active role in the appointment of presidents of newer, less well-established prefectural universities, the outcry was so great that the proposal was immediately withdrawn.

In the private university sector there is a great variety of systems of internal regulation. Some of the better universities have developed traditions of faculty self-government as thorough-going as those of the former Imperial universities. Others, however, follow a more U.S. style pattern of a nonfaculty board of trustees which appoints the president, who in turn may or may not have extensive control over the appointment of high-ranking university officers. There are some universities in which the board has more the character of a board of directors of a private company than of a body of trustees acting in the public interest, and in these relatively few profit-making institutions faculty autonomy is weak or nonexistent.

The danger therefore is not any lack of autonomy on the part of

universities and faculties but rather the inability to use that autonomy creatively for innovation, experiment, and the meeting of new challenges. The weakness comes from several sources.

First, the inadequacy of public investment in higher education. although the national universities, and particularly the most prestigious among them, are much better off than the private ones, Japan's average investment in higher education is still lower than that of all the other advanced countries of the world, whether measured by absolute expenditure per student, as a proportion of GNP, or as a proportion of the national budget. Second, the imbalance in resource allocation as between public and private universities as a recent OECD analysis puts it, the private universities enroll almost eight out of every ten students but receive only four out of every ten yen spent on education. In most private universities fully half the teaching staff is on a part-time basis. Third, rigidities in the internal traditions of the university, such as the chair system, low mobility, spheres of influence, colonization, cliques, faculty inbreeding, fragmentation, and weakness of higher authority

Need for Cooperation

Japan's endemic educational problems, which have been underscored by the student challenge to the very legitimacy of the university and its authority, call for new systems of coordination. There are more interest groups, or publics, involved in the universe of higher education today than ever before. Industry, government (including its various conflicting branches), university administrations, senior faculties, junior faculties, researchers, graduate students, undergraduates, parents, the public interests, and so on. Before the war, the coordinating mechanisms worked reasonably well. The power of the ministry as the agent of the national commitment to higher education was counterbalanced by the deeply entrenched traditions of university self-regulation. The flow of public expenditure for higher education kept up quite nicely with expanding needs. The private universities, on their side, treasured their independence from government and at the same time contributions and student fees.

Their relatively simple coordinating system worked reasonably well until the end of the war. But the U.S.-inspired reforms called for new systems. With the reduction of the authority, as well as the prestige, of the Ministry of Education, other bodies arose to fill one or another stretch of the leadership vacuum. The Japan Science Council, for example, whose organization was inspired by the American Occupation, entered the breach in the field of science and research. Associations for accreditation and university chartering, for private universities, national universities, junior

colleges, and so forth were organized, each designed to take over leadership in its own particular sector. Most of them, however, failed to establish preponderant authority and ended up by becoming another pressure group rather than the sole leader of its constituency.

Although the individual universities are justifiably proud of their administrative autonomy vis-à-vis outside authority, this very autonomy has often operated against effective cooperation. Individual faculty, department, or chair autonomy is sometimes so thorough-going that it is difficult to achieve cooperation among the faculties of a single university, much less among universities.

The skyrocketing enrollments and costs have put this entire fragile system under intolerable pressure. Nor is there anything in the offing to suggest that the pressure will slacken. On the contrary, there is every indication that the demand for higher education will continue to rise, very likely toward some version of universal higher education. This means that existing systems of leadership and coordination will become even less capable of meeting the demands of the situations than before.

Even within the government, the Ministry of Education is no longer the exclusive representative of the educational constituency. Now that higher education has become a mass phenomenon rather than a limited elite one, it engages the direct attention of all the political parties as well as of many legislative committees. It is clearly of concern to the business community and, if only segmentally, to the labor movement as well, particularly to the powerful Teachers Union. Within government, there is a wide variety of interests, the Ministry of Finance's being obvious and traditional. But since education is so important for the sustained high-level growth of the economy, for technological and managerial innovation, and for the technology import/export balance, we find the government's Science and Technology Agency, the Ministry of International Trade and Industry, the Overseas Technical Cooperation Administration, and many others increasingly involved. The Institute for International Studies and Training (Boeki Daigaku), for example, an innovative experiment in early mid-career executive training in area studies and foreign languages, is a product of the thinking of the Ministry of International Trade and Industry rather than of the Ministry of Education. More important pressure for the improvement of language training comes from the Overseas Technical Cooperation Administration and other government bodies concerned with technical aid and the training of Asian students in Japan's universities, than from the Ministry of Education.

It is clear that some changes are on the way, and there is even general agreement on what the shape of these changes must be—something

close to the proposals of the Ministry of Education-appointed Council on Higher Education. These would include the revision of the entrance examination system, financial support for the private universities, a quantum jump in financial aid to students, the development of professional administration within the university, increased mobility among universities, diversification of types of universities and their curricula, increased numbers of high-quality institutions, levelling-up of poorer schools, sharper separation of graduate school and research from general undergraduate education, and more junior faculty and student participation in university governance.

To implement these reforms, new types of coordinating systems will have to be created, freer of government than the Ministry of Education, but more capable—because of prestige, ability to articulate the diversity of interests in education, and its nonpolitical character—of exercising genuine leadership. Within the university this will require an autonomy that is not merely passive and defensive but one capable of innovation and compromise. Even though all of these new coordinating systems will develop, paradoxically the Ministry of Education will, in certain respects, have to become stronger, rather than weaker. Although it will have less control over the universities, it must become a more effective advocate in the competition for funds as against other claimants on the nation's resources.



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LATIN AMERICA

CHARLES W. WAGLEY

There is doubt in the minds of many people whether a cultural unit called Latin America truly exists. There is a vast difference between Brazil and El Salvador; between Mexico and Argentina, and between Cuba and the Dominican Republic. These differences are in size, political structure, composition of the population, degrees of economic and social development, natural environment, and even in historical background. How can one describe, much less establish a policy or strategy for all of the American Republics? Yet these countries to the south of us which we call Latin America do share a body of cultural heritage. This common heritage derives from their common Iberian background, from the fact that they were colonies of Spain and Portugal, and that since independence they have been in an economic colonial status vis-à-vis Europe and the United States. Furthermore, in varying degrees they share some common economic and social problems, not only among themselves, but with other less developed countries of the world. Such problems are a rapidly expanding population, an illiterate peasantry, exploding cities, an economic dependency upon the export of raw materials such as Chilean copper and Brazilian coffee, political instability, the maldistribution of land, the pains of nascent industrialization, the frustration of a growing middle class, the ills of inflation, and the weight of debt on borrowed capital.

The systems of higher education in these Latin American countries reflect their common Iberian heritage, their colonial past, and the current social and economic problems which have been briefly listed above. But it must be said each country has its own system of education, its own educational problems, and its own educational history. At the beginning of this century, Argentina was already a predominantly literate society while just

to the north Brazil was predominantly illiterate. Peru has had the problem of educating people who speak an indigenous language (Quecha) while in Chile only a hundred thousand people or so did not speak Spanish. In any case, in this paper I shall discuss some problems of Latin America that seem to be common to much of the region, if not to other countries of the modern world.

First, it must be said that in the nineteenth century and during the first decades of this century, all Latin American countries were elitist oriented. Out of the colonial past they had inherited a rigid class structure that divided their societies into a small aristocracy and into a mass of poor and illiterate peasants and urban workers. Education was for the elite, and it was aimed at forming cultured humanistic gentlemen. The ideal man toward which education was oriented was described by José Enrique Rodó in his famous essay *Ariel* published in 1900. He dedicated his essay to the "Youth of America," and in it, he pleaded with the youth of Latin America not to imitate the crass materialistic Yankee to the north whom he compared to Caliban, the animalistic slave of Prospero in Shakespeare's *The Tempest*. He urged that education be aimed at creating a society of Ariels, similar to the sensitive, spiritual, humanistic woodspellee liberated from bondage by Prospero in this same play. *Arielismo*, as it is called, became the dominant ideology in Latin American higher education. Thus, philosophy, the arts, literature, and humanistic subjects overshadowed science, technology, and the applied sciences. Latin American higher education still suffers from *Arielismo*, but the scene is changing rapidly in the second half of the twentieth century.

Early Reforms

As early as 1918, Latin American university students found their educational systems out of keeping with the world of their time, although most of them seemed to accept the ideal of *Arielismo*. In that year in the provincial Argentine University of Córdoba, the students went on indefinite strike, occupied administrative offices, and presented a series of demands for university reform. They demanded student participation along with professors and alumni in university government. They asked that university authorities such as the rector (i.e. the president or chancellor) be elected for a specific term. They asked for freedom from obligatory attendance at classes and free tuition. They demanded that the curriculum be revised and be related to national problems and issues. And they demanded that the university be "autonomous," that is, free from political and administrative interference from the government.

The Córdoba movement or the Córdoba Reform spread rapidly

throughout Latin America, although a large number of countries remained unconvinced or, as in Brazil, did not as yet have universities to reform. But in many Latin American universities, particularly the large national universities, students have been admitted to the governing bodies, participated in electing deans and rectors. Throughout Latin America university autonomy became almost a sacred concept which even the most powerful of dictators or military governments have hesitated to break. One cannot say that the university curriculum was drastically overhauled, for, in fact, these same rebellious students of the 1920s were still elitists. But, to us in the United States, this university reform, begun as long ago as 1918 in Latin America, sounds strangely modern. The demands of the students seem very much like those coming from our students in the late 1960s. At Columbia University, it was only after the students' strike of 1968 that a University Senate was formed in 1969 with elected student senators and that students were allowed to participate in crucial university committees. We have not come to the point that we allow faculty and students to elect our university presidents, but in many institutions they are demanding that they be consulted on such appointments. At least one president of a great North American university has suggested that the office of president be held for a term of seven years. Could it be that we in the United States are so far behind Latin America in university reform?

It must be said that the Latin American university reform did not solve many educational problems. It probably created more administrative problems than it solved. But most certainly Latin American university students have had until recently a greater voice in educational policies and in national affairs than in the United States. In fact, it used to be said that one should watch the politics of university students to plot the direction of political developments of any Latin American country. The university reform did provide students with considerable political power (this is less the case today), but the reform was less profound educationally. It did not really modify the elitist structure of higher education nor the essential classical and humanistic character of the curriculum. On the whole, Latin American universities continued to be out of keeping with the needs of their respective nations. To understand why this is so, one must look at the whole system of education and the societies they are supposed to serve, not just at the institutions of higher education.

The Educational Systems and Social Needs

Latin American educational systems are full of paradoxes and dilemmas. On the one hand, there are universities older than any in the United States such as the University of San Marcos in Lima, Peru. On the

other hand, there are universities founded in the last few years, so new that they are housed in temporary buildings and without regular faculty. There are faculties and institutes of higher education of great distinction such as the Technological Institute in Monterrey in Mexico, the Biological Institute of São Paulo in Brazil, the Venezuelan Scientific Institute and others too numerous to mention. There are also faculties of higher education without adequate facilities and manned by ill-trained and part-time teachers. Most Latin American countries have an enormous range of schools and faculties of higher education covering almost every known specialty in the arts and sciences, applied sciences, and the professions. Yet most Latin American countries still do not have sufficient facilities nor personnel in higher education to train the people necessary for their needs in social and economic development.

With a total population of over 250 million people in all of Latin America, there are less than 750,000 men and women enrolled in schools and faculties of higher education. With a population of more than 90 million people, Brazil claims just over 250,000 university students, which is less than those in the metropolitan area of New York City. The fact is that higher education in Latin America is still for an elite group, although it now recruits from a much larger social spectrum than before. This apparent underdevelopment of higher education is a reflection of the whole system of education and not just the lack of funds nor even the motivation of people to seek advanced training.

All Latin American countries theoretically provide free and compulsory primary education. But despite enormous efforts and considerable expenditure of funds, it is estimated that as many as 15 million children of primary school age do not attend school. Either schools are too distant from their homes; their parents need their labor, or the schools do not have room for them. Furthermore, it is estimated that nine out of ten children who begin primary school drop out before finishing the course. Yet, secondary schools have expanded vertiginously throughout Latin America in the last two or three decades. This is due primarily to the rapid growth of a small town and urban middle class who want education for their children and are able to see them through the primary years. In Brazil, for example, a country that was notably lacking in secondary schools a generation ago, there has been an explosion of secondary education. In 1946, Brazil had but 417 schools of secondary education with but 66,420 students. By 1967, there were 20 times that number of secondary schools and more than 2,800,000 students. More than half of these schools were private, charging tuition, thus eliminating many students for economic reasons.

These secondary schools provide an admirably planned curriculum,

modeled to a large extent upon the French lycée system which stresses classical and scholastic subjects, but few of them have the faculty and the facilities to actually carry out what they promise. Again the dropout rate is enormous, perhaps even greater than for elementary schools. Throughout most of Latin America, as in Brazil, only a tiny fraction of students actually complete secondary education—perhaps only 1 out of 100 of the youths who began primary school. There are, then, very few students who qualify for higher education. The educational system from the beginning acts as a funnel or filter weeding out those who might go on to university.

Yet Latin American universities are more overcrowded than those in the United States despite the obstacles in primary and secondary education which allow but few to reach higher education. Latin American countries are being forced to adopt a mass-type system of higher education. The tremendous rate of population growth, the expansion of secondary education, and the need for trained personnel in all fields of endeavor have resulted in a rapid expansion of the university population. There are more young people knocking at the doors for admission to schools and faculties of higher education than can be handled with present facilities and professorial personnel.

There are two "solutions," neither of them satisfactory, which the Latin American university systems have adopted. First, there is the solution of selective admissions. A certain number of openings are made available in each faculty, calculated upon the availability of space and faculty. Candidates are admitted on the basis of secondary school records and examinations. Brazil is a good example of a country that has adopted the selective admissions policy. Strict admissions examinations are given for each faculty. A student must often take a special preparatory course for the examinations which are private and relatively expensive. An examination for admissions for one faculty of engineering, for example, is not valid for another for there is no national system of admission examinations. The number of failures is high especially for the prestigious schools of medicine, engineering and law; often four out of five candidates are failed. Sometimes, although there may be 300-400 openings, the faculty decides that only 200-300 have done well enough to pass, thus leaving unfilled places even in well-equipped universities. On the other hand, certain schools and faculties are undersubscribed, that is, there are not enough candidates in the examinations to fill their first-year classes. Nursing, veterinary medicine, agronomy, and other professions of less prestige sometimes cannot fill their quota of students, while in medicine, engineering, law, and other prestige professional schools a student might take admission examinations several times in an attempt to be admitted.

The other so-called solution is open admission, which is now being revived in some universities in the United States. By this method any student with a secondary education and the proper courses has the right to enter university. Some countries, such as Argentina and Mexico, have adopted a modified form of open admission. This has brought about a flooding of universities with the inevitable result that many badly prepared students are allowed to enter. It creates a situation where it is easy to get in but hard to get out; in other words, only a small portion of those who enter the university actually graduate. Students fail and repeat courses, and they may take many years to complete all of the examinations leading to a degree. Students are enrolled but do not (many cannot) attend classes. The University of Buenos Aires in recent years had a total enrollment of more than 80,000 students, and the National University of Mexico had more than 90,000. Neither university could probably seat all of its students if they, by chance, came to class on the same day. Under such circumstances, university education becomes as impersonal and automatic as in many large state universities of the United States and of Europe.

Whatever the admissions policy, the Latin American student faces a rigid university curriculum. There are few elective courses, even in faculties of arts and sciences or philosophy and letters which are apt to be the more flexible. The most sought after faculties continue to be law, medicine, and engineering as they were in Rodó's era in 1900, despite a recent effort to emphasize public administration, economics, teacher training, and the applied sciences. In general, Latin American higher education is much more diverse than before, offering a larger range of special fields, but it is almost as much out of tune with national priorities as it was before the Córdoba Reform movement. It still produces lawyers who will never practice law and physicians who balk at working in small towns or rural zones but who set up practice in the large cities where the competition in medicine is fierce. Latin American societies do not as yet offer a sufficient market for some of their most highly trained technicians and scientists who often seek employment abroad for economic and sometimes political reasons. Despite the excellent research institutes and the multiplication of faculties, there are not enough positions for natural and physical scientists nor for many people in the special fields of applied science in industry.

Educational Planning and Financing

The problems of Latin American higher education are not being solved for lack of planning, nor often for the lack of funds. Latin American governments have been spending an increasing amount each year on higher education in relation to their national budgets. In fact, there sometimes

seems to be a veritable flood of university reform plans in Latin America. Latin American university administrators are fully aware of new trends in higher education. As one educator put it, almost every letter from abroad (i.e., the United States and Europe) brings new solutions for our educational problems. There are cooperative programs between Latin American and North American universities such as that between the School of Agronomy in Minas Gerais (Brazil) and Purdue University (United States). North American and European foundations have made financial grants to improve Latin American institutions of higher learning and research, often with considerable success. Furthermore, the structure for national planning is present in most Latin American countries. Brazil has a Board of Higher Education (Conselho Federal de Educação), a National Science Foundation (Conselho Nacional de Pesquisas) and CAPES (Coordenação do Aperfeiçoamento de Pessoal de Nível Superior), which is dedicated to the improvement of university personnel and curriculum. Chile has a National Council of University Rectors who meet to establish national plans. And there are international organizations such as the Regional Inter-University Council which brings together the "national" universities of Argentina, Chile, Peru, and Uruguay and the Supreme University Council of Central America which aims at cooperative planning and activities. And CHEAR (Council on Higher Education in the Americas) has for 15 years provided informal meetings of university officials from both North and South America and has carried out several important studies of American university systems. Latin American institutions of higher education do not live in isolation, and if they are sometimes called archaic it is not for lack of knowledge of higher education in other parts of the world.

Furthermore, it would seem that it might not be difficult to bring about changes in Latin American universities. Most of them are public, and the largest are supported by the national governments. A few public universities are supported by states, such as the University of São Paulo in Brazil, and some are private, that is, founded and supported by nongovernmental organizations. Most of these private universities are Catholic, but a few are secular such as the University of the Andes in Bogotá. But even such private universities receive considerable direct and indirect support from public funds. Furthermore, Latin American governments have control over private institutions through regulations concerning curriculum, registration of diplomas, and other mechanisms. There tends to be greater central control over higher education throughout Latin America than in the United States. This would seem to provide the structure for national planning and development.

Obstacles to Change

Resistance to change, however, seems to derive not from lack of knowledge nor from the lack of a national planning body but from the internal structure of the universities themselves. One of the most astute and profound university administrators in Latin America once said that he had no difficulty in establishing a rational plan for the "new Latin American university" but asked, "how can I change the professors and the students?" He might have added how can I change the entrenched internal structure of the Latin American university? Most Latin American universities are not universities in the sense of unified corporate organizations. Most of them grew out of independent faculties and technical schools taking the form more of a federation than a single large unit. Most universities do not have a campus in the same sense that most universities in the United States do, although there is a trend to build "university cities" in an attempt to provide a central locale. Most Latin American universities do not have a central library. Instead each faculty, sometimes each "chair" or department such as sociology or physics, has its separate library. University-wide affairs often are limited to a few solemn acts carried out collectively, and sometimes there may be a unified approach in dealing with the government concerning funds or university autonomy. Generally, each faculty guards its independence as far as possible—in curriculum, admission of students, rules for students, recruitment of faculty, and other institutional functions. There is often a duplication of facilities, courses, and staff. For example, the same level course in, say, mathematics or physics, may be taught in several faculties of the same university. This fragmentation and independence of faculties is, of course, a heritage from Europe, but as a system it is not feasible economically or intellectually for countries with an urgent need to expand higher education. Nor does it seem efficient even for richer nations such as the United States or France.

Another focus of resistance to change in Latin American systems of higher education is the professors. Most, but not all, Latin American universities have by now modified or abandoned the traditional system of the "Cátedra" (The Chair), by which there was one tenured professor in each field—a "Cátedrático" of physics, of sociology, of European history and the like. In that system, all other teachers in the same field were but lecturers and subordinates. There was no position for a rising young scholar until the tenured professor retired or died. This tended to fragment the university even more, for in each faculty there were generally little "kingdoms" presided over by the "Cátedrático." Most universities, forced by increasing numbers of students and pressure from younger faculty, now have multiple chairs in one field of study and have created careers for

teachers in lower ranks. But in many professional schools and in some more traditional universities the concept of the single "owner of the chair" still prevails. Such entrenched individuals are hardly anxious for change in the system.

It is well known that most Latin American professors give only part-time to the university. Hardly any place are they paid well enough to live from their positions at the university without other sources of income. It has been said that "a professorship is an honor, not an occupation." Thus, a large percentage of Latin American teachers augment by necessity their incomes from business, journalism, industry, and other occupations, many of them teach in several faculties. One professor in Brazil, for example, taught sociology for a time in three separate faculties. With such a system, there is little time to spend with students out of class, and any research activities are generally done outside the university setting, often to augment income.

In recent years, there has been a trend throughout Latin America toward the "full-time" university professor. Of course, the full-time professor must be paid a better salary. One way of achieving full-time and of attempting to break the pattern of university fragmentation is the creation of university-wide institutes, such as an Institute of Physics and an Institute of Economics. In theory, the research and the teaching of a particular subject would be lodged in the institute, and the faculty of an institute would be devoted full-time to teaching and research. In several instances such institutes have become outstanding research and teaching organizations, but too often the faculties have tended to hold on to teaching and the institutes have become devoted to research and sometimes teaching on a very advanced level. Generally, it would seem that the central institute has been a solution more for the faculty than for the student, institutes create the equivalent of another position and provide better facilities for research. They do also provide a basis for the training of advanced students through participation in research. But one of the great needs of Latin American education is still the formation of a corps of full-time professionals devoted to university activities.

Equally important is the creation of a student body free to devote themselves full-time to their studies. Latin American students do not resist change in the university system, in fact, if one interprets their demands correctly, they are eager for change. But under the present circumstances they could not really study under any system that demanded more of their time and energy. The majority of university students are part-time. Even more, many Latin American students hold full-time jobs and are able to attend classes only in the late afternoon and evening—or in hours stolen

from their jobs. This is less true in medicine and other technical schools than in arts and science and philosophy and letters. In one study carried out in Buenos Aires some years ago, only 30 percent of all students were supported by their families, while 52 percent of the medical students had full family support.¹ In this same study, it was found that 90 percent of the university students lived at home with their parents, or in their own homes in the case of the few that were married. There are few scholarships available, and although tuition is free or relatively cheap at least in the public universities, families cannot afford to support their children as they seek higher degrees.

This does not mean that many Latin American university students derive from poverty-stricken families. Latin American universities now draw students predominantly from the middle class. Throughout Latin America the middle class is growing, especially in countries such as Argentina, Brazil, Chile, Venezuela, Colombia, Mexico, and others where economic development is rapid. Those in the new middle class are ambitious for their children. They do not want their children to work with their hands as some of them did. There is almost a cult of degrees in the new bureaucratic societies in which this new middle class lives; degrees are the passage necessary for positions. And middle-class parents want their sons and daughters to be physicians, engineers, lawyers, school teachers, and the like. They urge their children to enter university, but their incomes are generally not sufficient to support them during the extra years of study.

Student Activism

Most major Latin American universities are urban, most Latin American students live at home. The students, then, reflect the values of their urban middle-class parents. There is a longstanding stereotype that the Latin American student is a wild-eyed radical, urged on by agitators who may be just "professional" students, and uninterested in studying. Latin American universities do have their quota of radicals and agitators, and traditionally student politics have been more heated than in the United States because students have had a greater voice in internal university affairs and even in national politics. But all serious studies of Latin American students indicate that they are far from wild-eyed radicals; most of them are fully aware of the privileged position they have by virtue of reaching the university. One seasoned observer of the Latin American universities has this to say: "Probably the majority of students in state universities are more secular than not, more nationalist than not, more middle class than

1. Kálmán Silvert, "The University Student," *Continuity and Change in Latin America*, ed. John J. Johnson, Stanford University Press, 1964, p. 214.

not, more center and left-center than not, and more worried about individual fortune than the fate of the state."² Student strikes have been a weapon more often used by students in Latin America than in the United States, but often such strikes have been aimed against serious invasions of academic freedom or student rights by autocratic governments.

One of the reasons why the outsider sees Latin American students as radicals is their fundamental and deep-seated nationalism. Latin American nationalism is based upon a pride of their own nations, but like nationalism everywhere it has its negative aspects. It was fostered by the anti-Americanism of the nineteenth century which *Arielismo* helped perpetuate and was reinforced by mistakes in U.S. policy toward Latin America—such as intervention in Guatemala, the Dominican Republic, and Cuba—and by the growth of American economic power and investments in their countries. Latin American students thus tend to blame the United States for many of the ills of their countries. To be blunt, it is the impression of many people who have worked with Latin American students that they distrust, even rabidly dislike, the United States for what it represents today in the international scene. But this anti-Americanism should not be confused with political radicalism, nor with a dislike of the North American people and their achievements.

The situation of many Latin American universities is today truly disheartening to say the least. In several countries both students and faculty are faced with military regimes which have imposed strict limitations on academic freedom and research. In other countries with relatively democratic governments, the universities are apt to be viewed as foci of opposition to be controlled for the benefit of tranquillity and economic development. Hardly a day goes by without news of a university protest, demonstration, or strike. Few Latin American universities go through a full academic year without interruptions. Latin American professors and research scientists are attracted to Europe and to the United States, not only for larger salaries, but for the right to teach freely and to carry on their research without political intervention. Not only are Latin American universities under pressure from their governments, but it must be said that most of them operate by an archaic system which is based upon social values, methods, and facilities which are out of date with the modern world. If this situation continues, one wonders how the Latin American countries will be able to train a new generation of administrators, technicians, professionals, teachers, and all those leaders needed to man their increasingly complex societies.

Yet, all of these troubles of Latin American higher education are not

2. *Ibid.*, p. 225.

unique in the modern world. In 1968 French university students rebelled against the archaic university structure and the lack of facilities in their universities. In the United States we are now confronted with student dissatisfaction and student strikes. Our students are becoming more articulate and activist, especially in face of United States involvement in the war in Southeast Asia and the problems of the ghettos of the great cities. Students in the United States are asking questions about how and what we teach in our own universities, and they are questioning the structure of the North American university itself. North American students are beginning to sound like and act like Latin American students.

And, paradoxically, North American universities are becoming more similar to Latin American universities. Students are more highly politicized and will soon be able to express themselves by vote (people over 18 years of age have been electors for many years in most Latin American countries). Students are now represented on university senates and even on boards of trustees. Open admission versus selective admission is being debated in the United States and one of our great public universities, The City University of New York, has adopted an open admission policy. As Latin American universities turn to mass education and as the universities of the United States begin to deal with more varied and less complacent types of students, there seems to be a convergence in the kinds of problems each system faces. As many Latin American universities attempt to "improve themselves," often on the pattern of the United States, it seems to many North American educators that we are becoming "Latinized" as our centers of higher education take on the complexion of those in Latin America.

In Latin America and in the United States, the future of higher education is one of the fundamental problems of today. As societies become more complex both socially and technologically, the body of knowledge which must be transmitted from one generation to another increases almost geometrically. We are faced with "new" problems not even envisaged a generation ago, and we can hardly imagine the problems that the next generation will be called upon to solve. How could a professor of my generation imagine the degree of pollution which this generation must suffer or the importance to the next generation of pollution control? How could one have predicted that in 1971 The City University of New York would have an enrollment of over 150,000 students? How could one imagine that the city of São Paulo in Brazil would have over 6 million people? How can one imagine that that same city 20 years hence may have 20 to 30 million people? How can this generation of students imagine what their lives and their societies will be like in the year 2000? One thing is certain: higher education will and must change throughout the world. We can no

longer hang onto the hoary traditions of the past. This is as true for Latin America as it is for the United States and Europe. University reform is much more crucial today than it was in the time of Rodó or the Córdoba Reform.



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COMPARATIVE LESSONS ON NATIONAL SYSTEMS

BARBARA B BURN

To attempt to carve lessons from past developments in higher education in different countries is a risky undertaking. A system of higher education is not merely a set of institutions which some young people enter and from which fewer later emerge armed with a sheeplekin. As higher education has increasingly become the chief, if not almost exclusive, channel for upward mobility, it increasingly determines who will be a nation's elite and what their social roles are likely to be. It incorporates the values and visions of the society of which it is a part and is rooted in a nation's history and priorities. The notion that the systems of higher education of different countries might learn from each other must take this into account.

Even though a country cannot solve its problems by borrowing directly from the experience of others, it can perhaps benefit from seeing them in a wider frame of reference than mere self-examination permits. It is therefore useful to examine the different approaches to common problems in higher education. I shall discuss the following common problems facing higher education in the 1970s: soaring enrollments and costs, the need to diversify and yet coordinate higher educational institutions, finding the right balance between coordination and institutional autonomy and, within institutions, between professorial power and other power, and finally devising a comprehensive and reliable methodology for planning which will in fact be used in making policy.

Increased Enrollment and Rising Cost

The principal immediate problem is expanding enrollments. On a worldwide basis enrollments in higher education almost tripled between

1950 and 1965 In the 22 member countries of the Organization for Economic Cooperation and Development (OECD), comprising most of Western Europe, the United States, Canada, and Japan, enrollments went up in the same period from nearly four million to close to ten million, or by 250 percent. By 1980 another 12 million students may be enrolled in higher education in those countries. In India enrollments have increased eightfold since 1950.

A major OECD target in the 1960s was to reduce the inequality of access to higher education among different levels of society. This was not achieved. Youth from upper strata still make up about one-third of all students in higher education in the OECD countries. The proportion of students from the lower and middle social strata failed to go up. Nevertheless, in terms of absolute numbers, this latter group more than doubled. Higher education is thus having to adjust to two pressures: an enormous increase in student numbers and a major increase in students coming from different backgrounds and having different expectations and demands than the students traditionally served by the higher education institutions in Western Europe and elsewhere.

Current trends toward more flexible admission to higher education and toward comprehensive secondary schooling will add to the demand for learning from lower socio-economic groups in the 1970s and further diversify the student mix. So will the rising enrollment of women in higher education.

Finally, while past and expected enrollment increases in Western Europe and worldwide are dramatic, the average percentage of 20-24 year olds enrolled in higher education in Western Europe in 1965 was still less than 15 percent. In India it was closer to 3 percent. If higher education institutions ever accommodate the majority of young people—and the United States is the closest to this with over 40 percent enrolled—radical change will be required in order to cope with such "mass higher education."

Now as to costs. Spiralling enrollments in higher education have been accompanied by proliferating costs. In nearly every country expenditures have been going up much faster than enrollments. In Great Britain, the increase in recurrent expenditures on the universities from 1950 to 1970 was three times the increase in enrollments. In Canada such expenditures have risen more than twelvefold since 1955. Similar rises have occurred elsewhere. The cost per student has escalated, for example quadrupling for French university students between 1955 and 1965.

Rising costs are prompting measures to retard their rate of increase, and these measures in turn affect the internal functioning and external relations of institutions of higher education. The number of students per

teaching staff has risen. Staff-student ratios are as high as 1:40 and even 1:60 in some European university faculties or departments. The proportion of junior and part-time teaching staff to total staff has gone up sharply in all the continental European countries. In a shortage period they are more available and less expensive. They are also increasingly demanding a part in decision-making more commensurate with their contribution to teaching.

Economy measures aimed at restricting the demand on higher education resources are altering the composition of student bodies. To maintain some balance between student numbers and available laboratory and other facilities, especially in science courses, the German universities have introduced a system of quotas or *numerus clausus* on admissions. The "closed" faculties of the Swedish universities have comparable entry restrictions. Throughout Western Europe enrollment increases have been most pronounced in the social sciences and humanities. One can speculate that the rapid expansion in these relatively less expensive fields, a by-product of the financial squeeze on higher education, has had its impact on reform in internal governance, as it is the students enrolled in these fields who have spearheaded demands for wider participation in governance.

Other economy measures may have had an opposite impact. France, Sweden, and Germany have taken steps to shorten the study period required to obtain a first degree and are simplifying requirements for advanced degrees. Everywhere, university systems plagued by high drop-out rates are seeking to reduce them and to eliminate so-called "perennial students." These and other measures aim at increasing the productivity of higher education and diminishing pressures on sorely taxed resources. They also leave students less time to press for institutional change.

Rising costs are bringing changes externally as well as internally in higher education. For example, in Great Britain the universities' influence on government decisions with respect to public funding of the universities has diminished. Until a decade ago the universities jointly presented their needs for funds to the government through the University Grants Committee and typically got what they requested. Advisor to government since its establishment in 1919, the University Grants Committee (UGC) represented to government the interests of the universities, serving as a buffer between the dons and government. In recent years the role of the University Grants Committee has become less unilateral. To help assure the universities of the funds they need, it now presses them to rationalize what they do. It is more active in telling the universities what in its view (and that of the government) would best respond to national needs. It suggests which universities should teach in fields where limited student demand and expensive resources indicate consolidation. The UGC also has pressed the

universities to analyze how teaching staff allocate their time so that the universities can better justify and even improve their utilization of costly teaching resources. In short, the pressure of rising costs has gradually transformed the University Grants Committee from an instrument largely of one-way communication and a means of warding off government into a two-way medium.

Perhaps the most dramatic new international development in higher education, aimed at least in part at reducing costs, is the establishment or expansion of nonuniversity higher education. The University Institutes of Technology (IUT) in France, the polytechnics in Great Britain; the community colleges, *Collèges d'Enseignement Général et Professionnels* (CEGEP), and the Colleges of Applied Arts and Technology (CAAT) in Canada; the Engineer Schools in the Federal Republic of Germany; and on the other side of the world the Colleges of Advanced Education (CAE) in Australia and higher technical schools in Japan. The establishment of university branches or affiliated universities by four universities in Sweden appears to be part of the same pattern.

These new kinds of higher education institutions date with few exceptions from the 1960s. Their costs per student are or are alleged to be less than the universities'. They tend to have less stringent admissions requirements than the universities and therefore provide more democratic access. These new and growing institutions claim to offer programs geared more to the application than discovery of knowledge and to be more oriented toward the student with practical aptitudes—the future technician and junior executive. It is consequently alleged that these new institutions are more responsive to meeting national demands for trained manpower. At the same time at least some of them seem to follow university models to enlarge their offerings in general education, to compete in part for the same faculty as universities, and even, in the case of Britain and Australia, to offer awards having equal status with university degrees. And like the universities, these new institutions are developing, not in isolation, but coordinated among themselves and part of the total higher education system.

Problems of Coordination

If soaring enrollments and costs are critical problems common to virtually all systems of higher education today, coordination may be a yet more difficult problem. A look at the new polytechnics in Great Britain illustrates the complexities.

The polytechnics offer professionally oriented programs of university and subuniversity level to part-time and full-time students and focus on teaching rather than research. Their admissions requirements are less

rigorous than the universities'. The "poly's" are financed by local governments. However, as more than half of the funds available to the local authorities come from the national government, the polytechnics' level of funding is determined nationally, at least indirectly, as well as locally. They are said to be different from, not inferior to the universities, although their less rigorous admissions policies and lower levels for faculty salaries, library materials, and student facilities make this open to question.

National policy in Great Britain since the early 1960s has supported the principle that higher education should be available to all who are qualified and wish to attempt it. Carrying out the policy requires decisions on how much and how quickly the three different sectors in British higher education will grow: the universities, the colleges of education which train teachers; and the polytechnics and other post-secondary institutions falling in the so-called further education sector. In the last ten years over half of all students in higher education have been in the universities. If this proportion is to continue and the twofold rise in enrollment demand anticipated by 1980 is to be met, the universities will need to double their capacity. Otherwise the other two sectors will have to increase proportionately. However, such expansion of the colleges of education is unlikely unless their educational mandate includes more occupations than teaching.

The universities can decide how they will use their resources and what their functions are within the limits of funds allotted for five-year periods by the national government and of the recommendations on academic programs, enrollments, and unit costs set forth by the University Grants Committee. In principle they are autonomous. The polytechnics and colleges of education must work within different constraints. The national government sets policy on their functions within the entire system. However, their resources are fixed through negotiation with the local authorities to whom they are in the first instance answerable, and in these negotiations some institutions fare better than others. The expectation that polytechnics and colleges of education will respond to national policy on their role, when decisions are made locally on their funding and functions, results in a peculiar institutional schizophrenia, not to say confusion.

The universities are coordinated not only through the UGC but also through their own increasingly vigorous efforts to present a united front to the government and UGC through the Committee of Vice-Chancellors and Principals. This body has become more active in the last few years in formulating and pressing the universities' interests, although interuniversity competition is far from dead. Institutions of advanced further education, including the polytechnics and the colleges of education, are less

organized to identify and press for their shared interests vis-à-vis the national government.

This review of the situation in Great Britain suggests some of the problems involved in expanding higher education in an interrelated but only partly coordinated system. In education there are no islands. Decisions in one sector and at one level have repercussions at the others. Policy-making at the national level must somehow mesh the national interests in all higher education with the need for some institutions to be particularly responsive to local or regional interests. In such decision-making a balance must be struck among the needs for coordination of all higher education, diversity among institutions to meet national, local, and educational interests, autonomy at the institutional level, and equality among different kinds of institutions.

Great Britain is only one example of the problem of coordinating the interests that clamor to be heard in determining the future of a national system of higher education. A comparable problem exists in the federally organized countries of Canada and the Federal Republic of Germany, where the constitution places education under the jurisdiction of the provinces and Länder (state governments) respectively. In both countries higher education has become too important or too expensive to leave wholly to these political units.

To help the provinces meet the rising costs of post-secondary education in Canada, the federal government has since 1967 transferred unconditionally to the provinces certain fiscal resources on the basis of a fixed amount per capita for the population of the province or half of eligible operating costs, whichever is higher. This system is a purely fiscal arrangement rather than actual cost-sharing between the federal and provincial governments. The funding and functions of higher education systems in the individual provinces now are determined by the interaction of provincial governments and their higher education systems. The national government can, however, exert influence through its funding of research, student scholarships, and determination of policies on overall national economic development. It may also decide to reduce the extent to which it supports operating costs and may well do so if these continue to soar.

The present arrangement in Canada is somewhat criticized for failing to plan the development of higher education in relation to total national needs. It is questioned most for making higher education policy so dependent on the provincial governments, some of which are less generous than others and some of which are more interfering than others. The coordinating systems that have evolved within most of the provinces represent government to the educational institutions more than vice-versa.

Coordination on a national basis among the institutions themselves remains limited. After all, the chief target for interuniversity coordination under the present system is the provincial governments, not national government. By the same token intraprovincial coordination has developed with considerable vigor in the last decade.

In the Federal Republic of Germany higher education has traditionally been under the *Länder* and mostly funded by them. However, the federal government for some time has provided funds for research and for one-half of expenditures on student scholarships, more recently it has paid half of the capital costs to expand existing universities and to start new ones. A recent constitutional amendment now permits the federal government to have a more positive role and it has begun to increase significantly its financial support of higher education. The urgency of expanding it and the uneven resources of the *Länder* to support it dictate an enlarged federal role. Even though proposals looking to the creation of new federal bodies to regulate study reforms and to coordinate university growth have been watered down in the face of widespread opposition to such federal encroachment, an expanded federal role seems now inevitable. A major step toward this was the establishment in 1970, by the joint agreement of the federal and *Länder* governments, of the new Commission for Educational Planning to advise on the future of the entire educational system, including higher education.

The last few years have also brought more active coordination among the *Länder* ministries of education and within the Conference of Rectors of Universities. Since 1959 the *Wissenschaftsrat*, or Science Council, set up cooperatively by the federal and *Länder* governments and research interests, has had an increasing influence over higher education development through its studies and recommendations, although officially it lacks formal authority to coordinate in this area.

Autonomy and Governance

The growing external coordination of higher education has effects on the internal structure of institutions. Accompanying the trend toward more national or regional coordination is a more recent and on the surface, contradictory, move in the continental European countries to decentralize decision-making within higher education systems. Individual institutions are acquiring a larger voice in their own affairs. Complementing this are widespread reforms to broaden and democratize decision-making bodies within the institutions and to introduce into their day-to-day operations the tools of managerial efficiency.

In France, autonomy and participation are basic to the reforms

launched by the 1968 Orientation of Higher Education Act. In their teaching and research programs, in finance, and in internal administration, the universities now theoretically enjoy considerable autonomy, although traditions of dominance by the central ministry may be hard to shed. Greater institutional autonomy is a basic aim of reforms in Spain, Italy, and Germany. This devolution of authority to educational institutions parallels a trend toward strengthening government at the regional level, thus modifying the extreme centralization long typical of these countries.

Without major change in the role of professors, more institutional autonomy would be an anachronism in higher education systems where, as in France, Italy, Spain, and Germany, the full professor has traditionally reigned virtually unrestrained in internal matters. It is not surprising that the oligarchy of the professors has been a leading target for student revolt. The French universities now have a quadripartite representation of professors, students, administrative personnel, and outside interests. Proposed reforms in Italy, while keeping a dominant role for the professors, would give representation to other interests including the students. Student representation in university bodies has existed since the early 1950s in Sweden, current experiments with participation of students, faculty, and other university staff at the departmental level are expected to lead to a yet more substantial student role in the future.

Authority structures in the German universities are yielding to the demand of junior and middle-level teaching staff for a say in what goes on (after all they now do most of the teaching), and at some of the universities, notably Frankfurt, Marburg, and the Free University of Berlin, students now have an active share in governance. In Great Britain students have steadily accumulated places on university committees, senates, and councils, and enjoy a greater role in governing other higher education institutions as well, especially the polytechnics. In Canada student participation—and that of faculty—in university decision-making has widely increased in the last several years.

Everywhere student power is pressing for and winning at least some voice in higher education affairs, often aided and abetted by the parallel demands of the growing ranks of junior teaching staff. However, almost everywhere students are still excluded from decision-making in matters of finance and staff appointments, the last bastion of professorial power.

The multiplicity of interests brought to bear on higher education, as it has become more expensive and devours an enlarging share of the national product, and the greater size and complexity of individual institutions require more managerial efficiency in higher education administration. The last few years have brought changes here also. Administrators have

longer tenure, deans at the "new" universities in Great Britain, the vice-chancellor at Oxford, rectors at the German universities, the new presidents of French universities. Central administrations, woefully understaffed in many systems in relation to the demands on them, are expanding in Canada, Great Britain, the Federal Republic of Germany, and elsewhere. Executive and policy-making organs which university expansion has rendered unwieldy are being streamlined or replaced by smaller bodies that have more authority to determine policy and supervise its implementation.

I have so far reviewed efforts to coordinate, diversify, decentralize, democratize, and achieve greater administrative efficiency in higher education. Mounting enrollments and costs have also prompted intensified planning efforts. So that higher education is not again caught off balance by unanticipated developments, planning is everywhere the touchstone of higher education systems. Ten years ago few countries had official planning bodies for higher education. Now in the OECD countries there are few that do not. However, to date the planners have not engendered much credibility among the policy-makers.

The imperatives of expansion in higher education require more reliable planning and more reliance by the policy-makers on the planners. They also call for answers to such questions as whether expansion in future higher education will be determined by the market situation or by analyses of national need or a combination of both, and how these will be forecast and fed into the policy decisions made. Study of such questions is now gathering momentum. However, in general, planning remains peripheral and inadequate at a time when firm and informed decisions are required.

George Santayana wrote that "those who do not learn from history are forced to relive it." What then can be learned from the developments touched upon in this review? I suggest the following hypotheses.

1. The traditional function of higher education—to train the elite for university teaching and research and for the professions—has become obsolete. Today higher education should be available to all qualified young people regardless of background, and to other age groups as well, offering the opportunity for professional mobility, enlarged personal satisfaction, and the knowledge and skills needed to function in an increasingly complex environment.

2. Higher education should also provide much of the training and new knowledge that contemporary society requires and should be responsive to changing demands. Converting this mandate to an actuality is likely to require more money and planning and most especially a better under-

standing of higher education so that it can be consciously adapted to new needs.

3 As the expansion of enrollments in higher education does not necessarily increase the proportion of students coming from the middle and lower levels of society, positive steps must be taken to increase this proportion. Conditions obstructing equal access to higher education need to be better understood.

4 The enlargement of higher education's mandate and the increasing heterogeneity of the student population demand diversity within higher education—diversity in programs, approaches, resources, and aims, and room to experiment. Diversity calls for a system of differentiated institutions or of comprehensive institutions incorporating a variety of programs, methods and aims or some combination of these.

5 A pecking order appears to be an endemic affliction, if not an inevitability, in systems of higher education. Elitist traditions continue to give first place to the universities, tempting nonuniversity institutions to poach on university resources and to pirate their aims, thereby eroding distinctions between university and nonuniversity higher education. Stubborn as this pattern may be, diversity and equality must be reconciled if a differentiated system enrolling students with diverse aptitudes and aspirations is not to relegate some institutions and their students to an inferior status.

6. An egalitarian network, not a hierarchical structure, of different kinds of institutions may be one way to realize this reconciliation. Another is through a system of comprehensive institutions having equal status and sharing similar functions. Such a network should permit student mobility within the system. It should have overlappings in functions and programs, and maximize the shared use of separate resources. It should be unitary but not uniform. It should seek a balance between a system that measures the resource needs of the several sectors of higher education separately and therefore tends toward inequality among the sectors, and one that measures the needs common to the separate sectors against each other and therefore tends towards homogeneity.

7 Piecemeal attention to the parts of an educational system does not work; the parts are interrelated. If growth is constrained in one direction, it bulges out in another, unless of course the entire system is clamped into a straitjacket. Consequently, measures designed to affect one part of a system must take into account their potential impact on the whole.

8 Reconciling diversity and equality taxes educational strategy; striking a balance between the need for diversity and the need for overall coordination may be even more difficult. If different bodies make decisions

affecting separate sectors of higher education, who coordinates the coordinators? If one body coordinates the total system, how can it avoid stifling initiative at the local and regional levels? How can it avoid measuring all types of institutions with a common yardstick and consequently blurring distinctions among them? Past experiences suggest that the best guarantee of diversity lies in a system combining a substantial degree of institutional autonomy with mechanisms to permit local and regional interests to influence policy. Not least among these are the interests of the institutions themselves.

9 Institutional autonomy must allow wider participation of various interests in the governance of institutions than was permitted by traditional patterns if the institutions are to be responsive to their several constituencies within and without. The trend to include in university governance representatives of the students, junior teaching staff, lay interest groups, and even professors where they were previously excluded from central governing bodies, as in Canada, is a necessary one. It permits a balance between broad participation and professorial prerogative more in keeping with the growing diversity of aims and interests that higher education must now serve. But, because these aims and interests vary among institutions and systems, the circumstances of each should in each case dictate the right balance. No single formula can apply, and the balance must remain precarious.

10 Despite the differences in higher education structures, aims, and problems in different countries, they can in fact learn from each other. How the central grants commission has evolved in one country may be useful to another which follows the same basic model. How Australia is developing mechanisms to reconcile federal and state interests in a national system may enlighten the efforts of such other federal states as Germany and Canada, or vice versa. Costing procedures worked out in one system are relevant to others. As problems of rising enrollments and costs and of devising appropriate structures to coordinate growth and decision-making become increasingly severe and typical—more in the developed countries but also in the developing—no higher education system can afford not to examine and profit from the experience of other systems facing comparable challenges.

exciting and gratifying to see at first hand the practical fruits of a piece of international cooperation that one has been involved in himself. Let me take one specific example that I know at first hand. Others could multiply it several hundredfold. It concerns a worldwide effort undertaken by Unesco to improve educational planning so that nations could get bigger and better results from the acutely scarce resources they were investing in education.

International Institute for Educational Planning

In the early 1960s most nations of the world, including the newly independent ones, felt an urgent need for a new and broader kind of educational planning. They had set ambitious educational targets and were embarked on an era of unprecedented, in fact, explosive, educational growth, aimed at meeting the needs of national development and ballooning popular demand for educational opportunity and equality. They recognized, however, partly from bitter experience, that valuable time and resources would be wasted if this accelerated educational expansion proceeded on a helter-skelter basis. At the time, however, the world's supply of sophisticated knowledge about educational planning and the supply of competent experts to apply such knowledge were both exceedingly meagre.

To meet this situation, Unesco in 1963, with added support from the World Bank, the Ford Foundation and the French government, established the International Institute for Educational Planning in Paris. (At about the same time it also established four regional training centers for educational planners and administrators.) Though organically tied to Unesco, the IIEP (as it came to be called) was set up as an intellectually autonomous research and training organization of university standard. Its research job was to provide deeper insights into the problems faced by educational planning and to create new concepts and techniques that could be put to practical use in each country and community. In other words, the research job was to develop some hard substance for training. The IIEP's training task was to develop competent experts from all around the world, but especially from developing countries, who would return to their respective nations as practicing planners or who might serve through international agencies—Unesco in particular—to help developing nations with their planning needs.

It was my good fortune to be the director of this new planning institute during its first five and a half years. No previous experience of mine—and there had been some very interesting ones—had ever been as stimulating and rewarding. We began from scratch on the 1st day of May in 1963 (a holiday in Paris) in three small temporary offices in Unesco's